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CONSUMERS' RESEARCH

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Bulletin

December 1948

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CONSUMERS' RESEARCH

Vol. 22 • No. 6 **BULLETIN** December 1948

Off the Editor's Chest

THE PATTERN of consumer behavior and the factors that influence a purchaser in making a particular choice are topics of earnest study by economists, marketing experts, and business economists. What particularly bothers these professional observers of the consumer's behavior is that in his buying he is often illogical and erratic and does not act along neat, well-planned lines. The homemaker who is in the market for a new mechanical refrigerator inspects and compares the features of as wide a variety of makes and styles as are conveniently available. She does not confine her observations simply to all makes in a particular price range but is likely to weigh the merits of a refrigerator home-freezer combination at $410, for example, against several makes of the conventional type electric refrigerator selling at prices ranging from $220 up, depending on size.

Since we are well aware of this characteristic of the American consumer, we take it into account in making our choice of brands for tests. We do not, for example, in testing men's hats restrict our selection simply to $5, $7.50, or $10 hats, but endeavor to pick widely popular models of a number of brands. It very often turns out that a lower-priced product shows better performance than one somewhat more expensive, and, as subscribers know, CR's *quality* ratings are entirely separate from and independent of the *price* paid for a product. Thus a man's felt hat at $7.50 was found to merit a higher rating than one selling for $10. On the other hand, one selling at $10 turned out to be better in quality than one priced at $5.

Although businessmen who have given intelligent thought to consumers' problems are aware that discriminating consumers pretty generally know that price is not at all a sure or dependable criterion of quality, we do occasionally receive a protest from some manufacturer or dealer who asserts that we have no right to compare products sold at different price levels. One case in point was the report on bicycles which appeared in CONSUMERS' RESEARCH BULLETIN, June 1948, in which two English-made bicycles, selling at $72 and $79.50 respectively, were found to merit a higher rating than a number of American-made brands ranging in price from $42 to $53. One correspondent protested that this was in the nature of comparing mules to horses and pointed out that since most bicycles in this country were made for boys and girls, they were designed with "the excess-energy, gadget-loving adolescent" in mind; that the European bicycles made for adults as a commonly-used means of transportation gave considerable attention in design to eliminating anything that made for extra effort on the part of the rider. This argument, of course, has one fatal weakness; namely that the manufacturers of the lower-priced bicycles of adult size do not *offer* them as suitable for children only; but try to sell them to anyone who chooses to buy, and there is never anything in their sales

(*Continued on page 27*)

Scientific and Technical Experts and Editors: F. J. Schlink, R. Joyce, M. C. Phillips, Helen P. Alleman, A. R. Greenleaf, Charles L. Bernier, and Dwight C. Aten. Editorial Assistants: Mary F. Roberts and B. Beam.

Symbols used to indicate sources of data and bases of ratings: A—recommended on basis of quality; AA—regarded as worthy of highest recommendation; B—intermediate with respect to quality; C—not recommended on basis of quality; cr—information from Consumers' Research's own tests or investigations; **1, 2, 3**—relative prices, **1** being low, **3** high. Note that price and quality are completely differentiated in CR's listings; **a quality judgment is independent of price**; 47, 48—year in which test was made or information obtained or organized by the staff of Consumers' Research.

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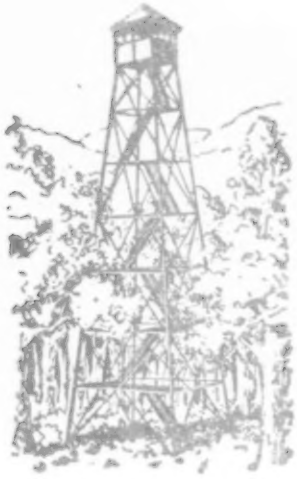


The Consumers' Observation Post

CHANGING THE STYLE OF FUR COATS every year is the new technique for bolstering the decline in sales. This year the coats are longer and fuller, and require more skins, reports Business Week. Prices, it is noted, are 10 to 30 percent higher, and the 20 percent federal excise tax also adds a sizable item to the cost of a new fur coat. The furriers apparently hope that they can persuade the woman who owns a last year's, or earlier, model that she wouldn't want to be seen at a dog fight in it, but retailers are not so sure. Stores, it appears, are unwilling to stock up until they are certain their customers like the new fashions (and will pay the price). It is not too difficult for a woman to have the old fur coat turned up to a three-quarter length or the even shorter jacket, and at that the result may be more becoming than one of the bulky new models that adds pounds to a woman's appearance.

* * *

TOOTH DECAY IN CHILDREN is occurring six times more rapidly than the dental profession can provide corrective treatment, points out a recent issue of the Journal of the American Dental Association. The major cause of dental caries is considered to be the high consumption of sugar and other carbohydrates. Several of the dental scientists contributing to the Journal found a marked reduction in development of tooth decay when sugar was drastically restricted in the diet, and one pointed out that our present consumption of sugar was too high, more than the body's protective mechanisms could successfully handle. The wise school administrator and dietitian will eliminate the candy bar from the school lunchroom.

* * *

SALES OF MEN'S SUITS were lagging this fall. In fact, according to figures reported by The Wall Street Journal, production of men's wool clothing was down as much as 10 percent from the comparable 1947 period. Suits in the medium price range are up $2 to $5 over those of 1947, and some retailers complain that business is bad, so that they cannot pass the increases on to the consumer. The manufacturers point out that there have been three post-war rounds of wage increases, and that worsted cloth has increased from $2.50 to $5 per yard. Women, however, are not expected to show as much sales resistance as the men, due to the wider acceptance of the "New Look," which didn't take too well last year.

* * *

FROZEN RABBIT MEAT, cut, ready to fry, is making its appearance in some sections of the country. Advertised as "like chicken, but better," it sells for something like 89 cents a pound. Rabbit breeding is becoming quite a business in southern California; breeders reason that other kinds of meat will become relatively scarce as population grows. At 89 cents a pound, however, rabbit can hardly be considered as an inexpensive substitute for beef.

* * *

ALLERGY is now estimated to afflict about half the population of this country in some form or other. The danger periods for acquiring allergies, according to Hygeia, are the periods before birth, and of infancy, and childhood. Overindulgence of cravings or excessive eating on the part of the expectant mother, allowing the infant any food in excess, introduction of new or raw foods during illness or convalescence, heavy exposure to dust, and drugs given in large doses are all factors which play a part in the development of allergies.

* * *

WHEN IS A MONOPOLY NOT A MONOPOLY? The answer seems to be: when it is a government monopoly. More accurately speaking, the federal government frowns

on monopoly and restrictive-selling practices by big business, but finds such conduct acceptable in its own operations. A case in point is the Tennessee Valley Authority which, according to testimony before the House Small Business Committee, markets its fertilizer only through cooperatives and refuses to sell to companies or farmers who are not members of cooperatives.

* * *

BUTTER is losing its market to margarine. Some 15 years ago the consumption of butter averaged about 18 pounds per person per year, reports a University of Illinois agricultural expert. This year the amount of butter sold is estimated at about 9 pounds per person. Present-day margarine chiefly uses cottonseed oil and soybean oil. It is expected that the next Congress will reduce or eliminate the present federal tax on margarine; such action, however, may not greatly affect the retail price which the consumer pays, which is determined more or less by supply and demand conditions in the market for edible fats.

* * *

THE MARKET FOR NEW AUTOMOBILES has boomed with the increase of war tensions in Europe. There has been some restoration of the "new car at any price" market, reports Motor. Another journal notes that manufacturers of small, economically-operated automobiles of foreign make are at present finding a ready market in this country. Austin Motors, for example, is delivering about a thousand cars a month to the U. S. There is, however, something of a slump in the used-car market, with prices reported down in some sections from $50 to $600. The decline is attributed partly to the seasonal slump and partly to tightened credit regulations.

* * *

IT WILL COST THE TAXPAYER at least 30 million dollars this year for the luxury of having the federal government buy up the surplus potatoes to keep them off the market. In many areas, according to one agricultural writer, the government is buying only the top grade, with the result that the lower grades are going to the grocery store, though at no cheaper price.

* * *

ALL READILY PERISHABLE FOOD must be kept at temperatures at or below 50°F in food handling establishments of Lincoln, Nebraska, except when it is being prepared or served. The city council recently put into operation an ordinance to this effect applying to milk, milk products, egg products, meat, fish, shellfish, gravies, poultry stuffing, sauces, salads, and certain other foods. The new law is especially designed to cover the ingredients of custard and cream-filled pies and pastries which constitute an ideal media for the growth of dangerous bacteria if such foods are not stored at the proper temperature, and which have caused many serious cases of food poisoning.

* * *

LOW-PRESSURE TIRES are bringing consumer complaints, reports Motor. The troubles range from hard steering to undue wear. Investigation, according to the trade journal, revealed faulty wheel alignment, pinched tubes where wide base rims were not installed, and incorrect inflation.

* * *

AUTOMOBILES should be washed frequently during the winter, as one means of avoiding damage from salt mixtures now in wide use by state and city highway and street maintenance departments to melt ice and snow. Since salt solutions not only damage body paint but cause rapid corrosion of underneath parts of chassis, fenders, etc., it has become really important to remove salt water residues as soon as practicable from all parts of a car. Recently state highway departments have given some consideration to the harm done to taxpayers' cars, or at least to roadways and shrubbery, by overuse of ice-and-snow-removing mixtures. To some extent, the problem of damage to cars is being mitigated by the growing practice of undercoating automobiles with a thick tarry material similar in appearance to a roof covering paint; this coating serves not only to deaden noises coming from the road and from chassis parts, but also to protect the underside of fenders, frames, and chassis parts from rust. We understand, however, that such coatings can be too thin to be effective; the layer is not always continuous and may contain pits or porosities. (Service agencies and

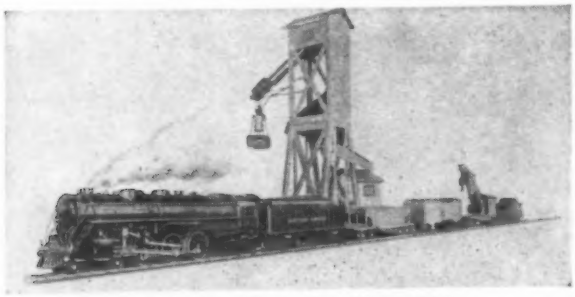
(Continuation of this section is on page 37)

Trains and a Few Other Toys for Christmas

WHILE the available supply and variety of toys is expected to be greater this year than at any time since pre-war days, conditions in the toy trade are still far from normal. Manufacturers, beset with all sorts of labor and material difficulties, particularly shortages of steel, are restricting new models to the minimum necessary to attract the trade and, even so, are not optimistic regarding their supply. The words "expect to have" are used freely with respect to all new products not actually on the shelves.

Electric Trains

An example of the continued use of substitutes for scarce metals is seen in the toy railroad field where all leading manufacturers are using plastic for car bodies and all possible parts and accessories. This offers advantages such as slightly greater definition of fine details, greater permanency and brilliance of color, and a 3 to 1 reduction in weight, which allows engines to pull correspondingly longer trains; but, even so, children are reported to be protesting that the plastic cars aren't like the real ones.



American Flyer Train Set, No. 4620A

The electric train field (excluding the much higher priced, and entirely different scale-model railroads) is still dominated by the two highly competitive leaders, Lionel and A. C. Gilbert (*American Flyer*). Both offer a wide range of train sets and accessories starting from sets with locomotive, two cars, caboose, track, and transformer, at $16 (*Lionel*) and $24 (*American Flyer*), up to $200 for sets, and almost unlimited amounts if numerous available items of equipment are bought.

Train Sets

A. Recommended

Lionel (The Lionel Corp., 15 E. 26 St., N.Y.C.) Lowest-priced complete sets are Cat. No. 1111, listed at $15.95: No. 1112, with extra car, $18.95. No. 1111 consists of a 41½-inch long freight train with remote control (forward and reverse) locomotive, two freight cars, caboose, track to make a 36 x 27 inch oval, a 25-watt (small) transformer, and a "*Man-u-matic*" uncoupling section operated by a trackside push-button. Since the set is realistic, well constructed, and operates on standard "027" gauge track, it can be recommended as the nucleus for a later more complete railroad system.

Lionel Train Set, Cat. No. 1111

American Flyer No. 48T Royal Blue Freight (A. C. Gilbert Co., Erector Square, New Haven, Conn.) $23.95. This is the lowest-priced complete train set made by this company, and consists of a 41-inch train with streamlined steam-type locomotive with headlight, tender, two cars, caboose, 40 x 50 inch oval track, 75-watt transformer, and remote-control coupling device operated by push-button. The caboose is illuminated, and the boxcar has sliding doors.

Trix Twin Railway (Macy's and Schwarz, $83 complete) consists of two trains (one freight and one passenger) operating on the same track with entirely independent controls.

Schilling (R. H. Macy, 34 St. & Seventh Ave., N.Y.C.; F. A. O. Schwarz, 745 Fifth Ave., New York 22; Sears, Roebuck & Co., etc.) $12.95. All plastic, including the locomotive, and not made to the minute or detailed scale of *Lionel* or *American Flyer;* suitable as the first "expendable" set for a small child (3 to 6 years) rather than as one upon which to build a system. Operates on four dry cells; desirable for those who may question the complete safety for a child of a train operated from 110-volt electric lines through a step-down transformer.

B. Intermediate

Marx (Louis Marx & Co., 200 Fifth Ave., N.Y.C.) Mechanical (spring-wound) sets, $4 to $6; sets for use with dry batteries, $9 to $11; 110-volt sets, $11 to $18.

New Trains Added This Year

In addition to the *Royal Blue* (previously described), new *American Flyer* trains include an 8-wheel Union Pacific locomotive ($45 to $52.50 for sets) with a "*Directronic*" control that permits a

limited degree of independent control when the train is operated on the same track as one other train of standard ac-dc drive. They also have a new Nickel Plate switching engine ($37.50 for three-car set), and a new transformer car ($3.25).

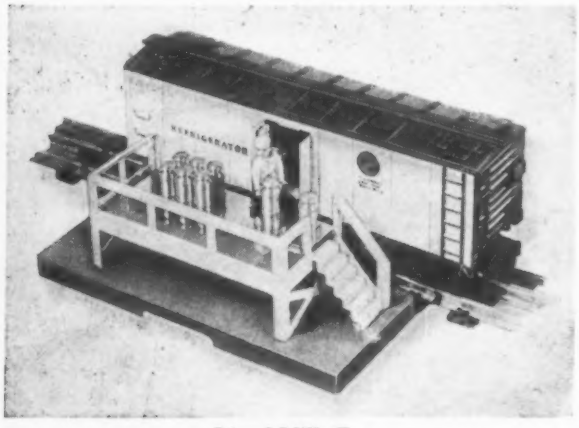
New *Lionel* equipment includes copies of new Santa Fe and New York Central Diesels ($65 for train sets), the first Diesels of their line; and a

Lionel Sante Fe Diesel Train Set

Pennsylvania electric style engine with pantographs that can be raised as if to pick up current from overhead lines, but does not actually work with overhead wiring ($67.50 for three-car set). New last year, the electric-type locomotive includes a built-in horn instead of the whistle of steam locomotives. Lionel also has three new green Pullman's and Pullman observation cars at $7 each and as parts of sets.

New Train Accessories

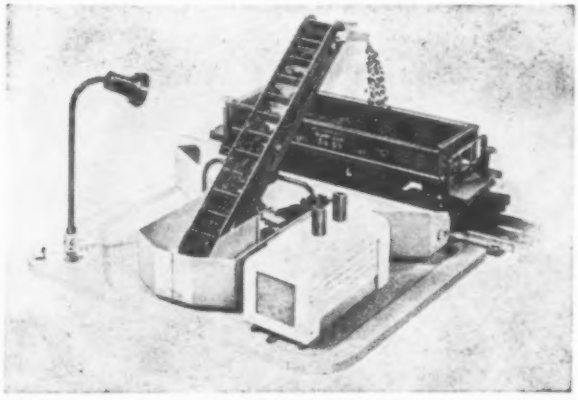
Outstanding accessories of the year include American Flyer's "Talking Station" and Lionel's "Milk Car." In the talking station ($14.95), upon the arrival of a train, a small phonographic disk automatically announces "American Flyer through train, New York, Philadelphia, Chicago, and all points West, All Aboard." Upon the completion of the announcement, the train starts automatically. As only this one record is currently available, the monotony of the announcement in the hands of a child might suggest remote location of the train set; the record does admittedly provide a realistic feature.



Lionel Milk Car

The *Lionel* milk car with unloading platform ($9.50) is one of the most intriguing of a rapidly growing list of mechanical freight cars. After the car stops, pressing a button causes a little man to emerge from a side door and place a metal milk can on the platform; this can be repeated to a total of seven cans.

Lionel also features a new log loading and unloading platform ($12.50) requiring only one track instead of the two as previously, and a new coal elevator at $10.95. All *Lionel* transformers have also been redesigned this year.



Lionel Coal Loader

While some accessories are interchangeable as between *Lionel* and *American Flyer*, this point should be carefully checked before purchasing, as track and some electric devices cannot be used on systems other than those for which they were designed.

To care for the frequent difficulty of holding sections of track firmly together, Productioneering Co., 29 Worthington St., Springfield, Mass., offers rubber track grips at 10 cents each. These are small rubber rectangles with raised edges to hold the end ties, and they not only hold the track but also provide some sound-deadening to the system. Three sizes are available for two- and three-rail track. The gauge and type of track must be specified when ordering.

General Features of Lionel and American Flyer Sets

Lionel uses "O" and "027" gauge in the conventional three-rail track; *American Flyer* uses 3/16-inch gauge in a somewhat more realistic two-rail track. The gauge of the track makes little difference excepting as a limitation on the expansion of the sets with parts of a different make. As trains and many accessories are not interchangeable, those buying a basic set with the thought of later expansion would do well to examine the entire line and all its features before committing themselves to one or the other make.

All steam-type *American Flyers*, excepting the *Royal Blue* and all steam-type *Lionels* excepting the "*Scouts*" ($15.95 and $18.95 sets) have provision for emitting "smoke" from the stack, with the difference that whereas in the *Lionels* it is emitted in a continuous stream, in the *American Flyer* locomotives it is synchronized with the drivers at all speeds and emitted in appropriately spaced "puffs" which are also accompanied by a "choo-choo" noise from the same engine-contained mechanism. The smoke is derived from a chemical inserted into the smokestack in capsule form and said to last two to three hours. ($1.25 for 12 cartridges, *American Flyer*; $1 for unspecified supply, *Lionel*.)

All *American Flyer* locomotives, and all *Lionels* have electric headlights, while the larger *Lionel* locomotives also have lights at the rear of the tenders. The 1656LT *Lionel* switcher, or "yard goat" ($25) also has a realistic built-in automatic bell.

Most passenger cars and cabooses have interior electric lights and many have sliding doors.

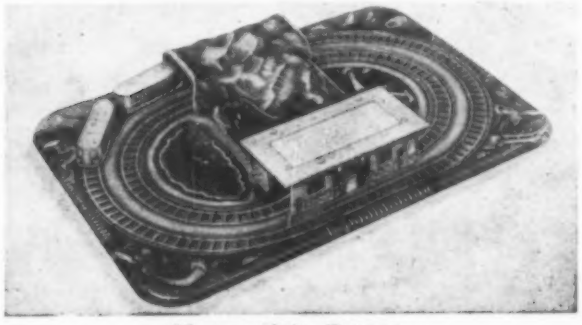
Lionel locomotives except the *Scouts* have built-in whistles. *American Flyer* whistles are located behind a circus signboard which sells separately at $5.95.

Trains and Train Toys for Smaller Children

For the child below the electric-train age, a wide range of paper, plastic, wood, and metal pull and wind-up train toys is available. Prices range from 50 cents up.

Macy's (34th and Broadway, N.Y.C.) offer a five-foot folded cardboard pull train ($1.49) in which the locomotive and cars are placed over empty milk cartons. Unless the discarded cartons are well washed, their use for such a purpose would certainly seem ill-advised, especially for such small children.

Strombeck-Becker Mfg. Co., Moline, Ill., and 200 Fifth Ave., N.Y.C., offers an attractive line of trackless pull trains, and build-it-yourself HO kits from 35 cents to $4. Their line includes crude replicas of several such old locomotives as the Wm. Galloway, Dewitt Clinton, etc.



Mystery Alpine Express

One of the most interesting of this year's train toys is the *Mystery Alpine Express* ($3.95; Harry Katz, 200 Fifth Ave.; F. O. A. Schwarz; etc.). In its course around a metal track, a little two-car train disappears into a tunnel on one track only to reappear from any one of three other outlets, or it may even run in the opposite direction.

In the mechanical (spring wound) train line, the British-made *Hornby* trains (H. Hudson Dobson, 200 Fifth Ave., New York 10; F. O. A. Schwarz, 745 Fifth Ave., N.Y.C.; etc.) are highly regarded in the trade. A rather complete set including two switches, etc., sells at $18.

Advanced Train Sets for Larger Children and Men

Scale model railroading has advanced to the stage of an important adult hobby, out of the class of toys. Models are available in intricate detail at almost any price the hobbyist can afford. Kits for home construction are also available. Macy's (R. H. Macy, 34th and Broadway, N.Y.C.) has an unusually complete line including an HO scale Swiss train, advertised as the smallest electric train in the world ($34.50); an Italian *Wagon-Lits*, O gauge, 8 feet long ($225) and a Pennsylvania Crocodile at $329 for the O gauge engine alone. For those interested in foreign trains, H. Hudson Dobson, 200 Fifth Ave., N.Y.C., handles the English *Hornby-Dublo* replicas of famous British trains as well as a line of English freight cars, or "goods wagons." Much of this equipment is available in kit form, as well as assembled.

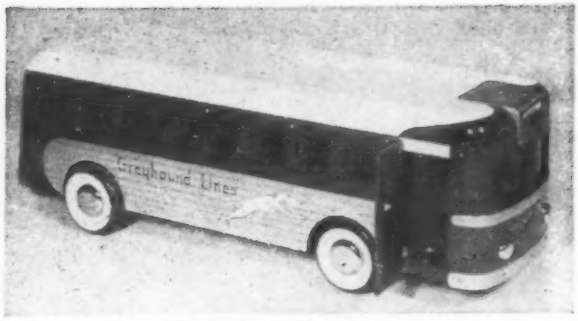
In buying model train kits, care should be taken to ascertain the age and experience for which they were intended as, unlike most of the kits designed exclusively for children, many of the model railroad kits are for persons with rather advanced mechanical knowledge and require mechanics' tools such as lathes, etc., for their assembly. They are rarely suitable for persons without considerable mechanical background and maturity.

Brief Listing of Toys other than Trains

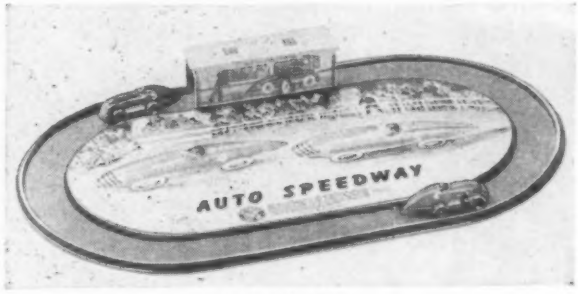
In the general toy field, there are such new toys as a "*Mystery Shooting Gallery*" ($3.49) in which, when the gun is properly aimed, a target drops without the use of bullets, pellets, or other objectionable missiles; personalized dolls ($3.71) with china heads and the child's name on the dresses; a "*Magicolor*" toy ($1.49) in which it is possible to produce different colors by merely applying various pressures to the prepared paper, for the formation of pictures, cartoons, etc.; and an ingenious "*Lilliput Theater*" ($4.98) with characters, stage, and backdrops for such plays as Little Red Ridinghood, The Three Bears, etc., and with the characters activated by the manipulation of back-stage magnets.

F. A. O. Schwarz is doubtless America's best known and best-stocked toy store (745 Fifth Ave., New York 22). This firm lists some 700 of their line of over 7000 toys in a new 77-page free catalog. They also have a separate 12-page catalog of trains, track, and accessories made by an English firm Trix Ltd. In addition to offering most of the trains and toys listed in this article, they have miniature electric stoves ($8.95); a child's electric vacuum cleaner that works ($8.95); puppet theaters with accompanying plastic phonograph records ($5.95 to $8.95); and all manner of dolls, tools, and toys. A good feature of their catalog is the inclusion of the age bracket for which each toy is intended.

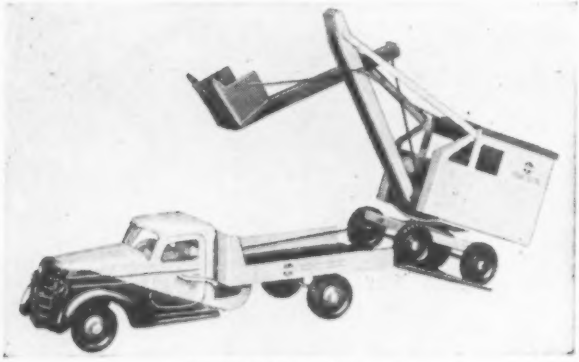
The *"Buddy L"* line of wood toys and steel toys (Henry Katz, Room 540, 200 Fifth Ave., N.Y.C.) as sold by many toy stores includes a long line of well-conceived pull toys for children from 2½ to 6 years old. Some of the larger steel toys include seats for the child (those so equipped are marked "S" in the following description). Wooden toys, to mention but a few, include a realistic *American Express Wagon* ($5.95), a town and country convertible that really converts ($7.25), a circus wagon complete with cutout animals ($10), a Greyhound bus with a workable door and a destination sign that can be changed to read Miami, New York, etc. ($7.95), and a sky-view taxi with movable glass top ($7.95). Some *"Buddy L"* steel toys are a hydraulic dump truck (S, $12.95), a fire ladder truck (S, $6.95), an auto tow truck (S, $12.95), and a new excavation truck with steam shovel that can be carried on it or used separately ($8.95).



Buddy L Greyhound Bus



Auto Speedway



Buddy L Steel Shovel

Buddy L Hydraulic Dump Truck

Buddy L Railway Express Wagon

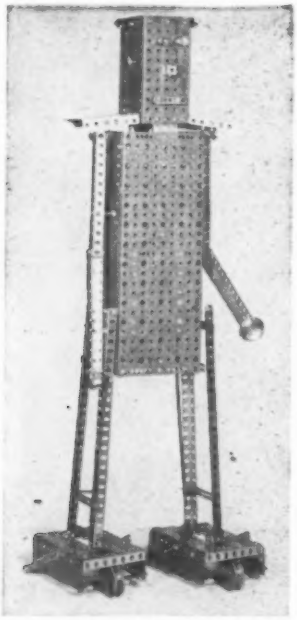
In *Auto Speedway* (Henry Katz, $1.98), a blue mechanical auto enters the pit and a red car comes out; a novelty for children from 4 to 8.

Other new Henry Katz toys include an *"Auto-Magic"* picture gun ($2.98) which projects pictures on the wall when the trigger is pulled. The price includes three rolls of film.

J. Warren Wiley (Room 450, 200 Fifth Ave., N.Y.C.) has an ingenious spring-wound mechanical lift truck ($3.98) that picks up and discharges loads on a front platform.

Metal Construction Kits

The well-known *Erector* construction kits (A. C. Gilbert Co., Erector Square, New Haven, Conn.) are substantially the same as last year with the ad-



Built with *Gilbert* Erector Set, No. 12½

dition of a larger set (No. 12½ at $50), capable of making a "walking giant" and including three motors, a transformer, caterpillar treads, and other features.

Meccano (Room 411, 200 Fifth Ave., N.Y.C.) has not changed significantly in the last year.

Lionel has added a new construction kit to its line in several sizes. Priced at $4.95 to $27.95, the principal differences from older and more generally familiar sets are the use of square girders and the fastening of the members with small rivets upon which rubber grommets are used, to act in place of nuts and bolts.

Building Bricks, Logs, Blocks

A. C. Gilbert has a line of building bricks ($1.75 to $7.50) in which raised dots and opposite depressions serve as simple interlocking devices to hold the walls together.

Lincoln Logs (Schwarz, $4 and $7) remain popular for 6-year-olds and up, for building log-type buildings.

Schwarz also offers "*Koo Zoo*" blocks for 1½ to 4 years consisting of 1½-inch plastic cubes each containing a plastic wild animal and a bell-like jingle. They have rounded corners, and float. $2 per set of 20.

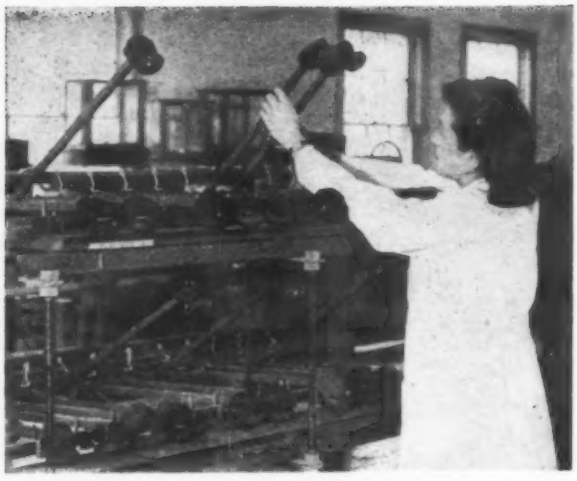
A "Plating Compound"—*Nickelette*

EVERY once in a while somebody offers something in a bottle that can be used to produce a thin metallic plating on a metal surface. *Nickelette Plating Compound*, sold in hardware stores, is an example of this sort of material, which is often advertised in home mechanics magazines. An analysis of this product indicates that its composition is approximately as follows: silver nitrate, 0.6%; potassium cyanide, 0.6%; calcium carbonate, 5%; water, 94%.

The product is a deadly poison, so poisonous that a small portion of the contents would constitute a fatal dose for a young child. The label carries a notice to the effect that *Nickelette Compound* is poisonous, but nevertheless it doesn't seem to represent the type of substance that should be used in the ordinary household, nor in any case, of course, should it be left where children might have access to it.

The name *Nickelette* is, of course, misleading, as also the term "chromium finish," and the product has the gross disadvantage that the surface coated with it will not resemble either nickel or chromium, and will tarnish rapidly under unfavorable atmospheric conditions, as would any layer of silver unprotected by lacquer or other nearly impervious material. (A sample hung outdoors lost all resemblance to silver and took on the color of brass in a short time.) The coating is, of course, so thin that it could have practically no wear resistance and it is hard to imagine any circumstances in which the method would be a fair substitute for actual plating by the electrolytic plating method used in commercial plating plants.

Men's Socks



Special Abrasion Testing Machine for men's socks.

MEN'S SOCKS have a place under almost every Christmas tree in the land, for socks are one of the most popular gifts for men. This year, it is true, more gay colors are seen than in previous years, but socks are still socks and the same factors affect their probable life and serviceability.

Three important features that make for long life in men's socks are proper reinforcements of the toe, the heel, and the region just above the heel, known as the high splice. It is here that wear is likely to be most severe, and inadequate or skimpy reinforcements at any one of these places may mean that a pair of socks must be discarded early, though the other parts remain in good condition. Some men cannot wear socks that have been darned, without considerable discomfort, and for them the problem of resistance to wear is especially important.

Fortunately, toes and heels are usually reinforced, even in poorly made socks, but occasionally the high-splice reinforcement does not extend upward a sufficient distance. The wear in this region is likely to be at a point about three inches from the bottom of the sock (as laid out flat on a table), and it is desirable for the reinforcement to extend this high or higher.

For some years Consumers' Research has called attention to the unsatisfactory sizing of men's hosiery. The U. S. Commercial Standards for hosiery provide for size measurement being made to the nearest half inch (which gives an allowance of almost a half size in marking hose under the standard). All the socks included in this test met the requirements *before* washing, but it was quite a different matter *after* washing. Only about a quarter of the socks tested met the standard then, and some, indeed, were more than an inch shorter than the marked size.

It has been said that some manufacturers knit only two sizes of socks, but adjust the product to as many as six different ones by stretching. If this is so, it would explain the difficulty, for a washed sock that has been "sized" in this way would have a tendency to revert back to original knit size.

Because the fault was such a general one, the socks tested were not rated down because of shrinkage in excess of the standard. The excessive shrinkage is mentioned, where it exceeded 10 percent. Until sizes can be relied upon, consumers will need to take care when buying, to insure a fairly good fit. The purchase of a half size larger than required and an examination of the socks to be sure they measure to the marked size would be in order. It would also be helpful to observe the elasticity of the foot of the socks, as non-elasticity could mean they had been stretched to size. Remember that foot deformities may result from too short hosiery as well as too short shoes.

Although the consumer may take some steps to guard against socks that are too short, there is little he can do to determine whether or not the colors will bleed into the wash water. Many men's socks do this, and the housewife should wash them separately and not with the regular laundry. This presents something of a problem for the housewife with an automatic washer who may not find it convenient or economical to run a separate cycle for the socks, and so would be obliged to wash them by hand. In the listings, comment is made concerning the important matter of bleeding of color into the wash water during the test.

Considerable bleeding does not always cause significant deterioration in the appearance of a sock. In the present test, for example, none of the socks tested was judged to be unsatis-

factory in appearance after washing, although it was true that the color of many bled badly into the wash water.

Except as noted, all the socks tested were circular-knit, and therefore did not have a seam in the sole of the foot. Absence of such a seam is considered an advantage by many who object to the discomfort of the seam along the sole of normally more expensive full-fashioned hose.

Ratings were based principally on the performance of the socks in abrasion tests made on the toe and high splice regions on a special abrasion testing machine constructed by Consumers' Research. The results provide an interesting illustration of the difference in price that may go with approximately the same quality — a point that CR is constantly noting in its tests. The *Phoenix* black nylon and cotton sock was the best of the men's socks tested, but, of course, it should have been, on a price basis — as the cost per pair was five times as much as was charged for a Woolworth brand of socks that was good enough to receive an *A* rating.

Socks tested were black dress socks, decorated blue socks, and the popular plaid type. All were short (9½-inch or slack) length, except as noted. (Regular length socks are about 14½ inches.) All the decorated socks had genuine wrap (knit-in) ornamentation, which is desirable.

Ratings are cr48.

Dark Blue and Black Socks

A. Recommended

Phoenix (Phoenix Hosiery Co., Milwaukee) $1.50. Regular length. 2 x 2 rib nylon with mercerized cotton reinforced top. Resistance to abrasion: of toe and high splice, very good. No bleeding of color into wash water. Much the best resistance to abrasion of all dress socks tested. **AA3**

Westchester (Sold by F. W. Woolworth stores) 30c. Regular length. Rayon with mercerized cotton top, heel, and toe; heel and toe reinforced with nylon. Resistance to abrasion: of toe, fair; of high splice, good. Color bled badly into wash water. **1**

Westchester (Sold by F. W. Woolworth stores) 39c. Rayon body with mercerized cotton top, heel, and toe. Resistance to abrasion: of toe and high splice, good. Color bled very badly into wash water. **1**

Crestwoven (Montgomery Ward's Cat. No. 30—110) 59c, plus postage. Regular length. Nylon body; nylon reinforced heel and toe; mercerized cotton top. Resistance to abrasion: of toe, fair; of high splice, good. Color bled badly into wash water. **2**

Super Essex (Interwoven Stocking Co., N.Y.C.) 75c. Rayon with cotton toe and heel. Labeled as "selected irregulars." Resistance to abrasion: of toe, good; of high splice, fair. No bleeding of color into wash water. **3**

B. Intermediate

Bachelor's Friend (Bachelor's Friend Hosiery Co., Div. of Jos. Black & Sons Co., York, Pa.) 35c. Regular length. Cotton. Resistance to abrasion: of toe and high splice, fair. No bleeding of color into wash water. Marked, "Laundry Tested and Approved, American Institute of Laundering." **1**

Esquire (Chester H. Roth Co., Inc., N.Y.C.) $1. Silk body, mercerized cotton top, toe, and heel. Resistance to abrasion: of toe, good; of high splice, fair. Color bled very badly into wash water. Shrinkage considered excessive. **3**

Interwoven (Interwoven Stocking Co.) 75c. Rayon and mercerized cotton with cotton and nylon toe. Resistance to abrasion: of toe, good; of high splice, poor. Very little bleeding of color into wash water. **3**

Interwoven (Interwoven Stocking Co.) 75c. Regular length. Body, rayon and nylon; sole and rib, mercerized cotton; toe tip, cotton and nylon. Resistance to abrasion: of toe, good; of high splice, poor. No bleeding of color into wash water. **3**

Westminster (Nolde & Horst Co., Reading, Pa.) 75c. Rayon and cotton with nylon reinforced heel and toe. Resistance to abrasion: of toe, good; of high splice, poor. Color bled very badly into wash water. **3**

Westminster (Nolde & Horst Co.) $1.50. Regular length. Nylon with mercerized cotton reinforcement. Full fashioned. Resistance to abrasion: of toe and high splice, fair. Very little bleeding of color into wash water. **3**

C. Not Recommended

Crestwoven (Montgomery Ward's Cat. No. 30—170) 39c, plus postage. Rayon and mercerized cotton reinforced with nylon. Resistance to abrasion: of toe, fair; of high splice, poor. Color bled very badly into wash water. **1**

Pilgrim (Sears-Roebuck's Cat. No. 86—2031) 49c, plus postage. Regular length. Rayon and nylon body, mercerized cotton top, heel, and toe reinforced with nylon. Resistance to abrasion: of toe and high splice, fair. No bleeding of color into wash water. **1**

Wearbilt (Chester H. Roth Co., Inc.) 49c, rayon and cotton. Second sample, 65c, 6 x 3 rib mercerized cotton. Resistance to abrasion: of toe and high splice, poor. Very little bleeding of color into wash water. **1**

Manhattan (Robert Reis & Co., N.Y.C.) 65c. Rayon with mercerized cotton reinforced foot. Resistance to abrasion: of toe, fair; of high splice, poor. Color bled very badly into wash water. **2**

Phoenix (Phoenix Hosiery Co.) 65c. Rayon and mercererized cotton. Resistance to abrasion: of toe, fair; of high splice, poor. Very little bleeding of color into wash water. **2**

Pilgrim (Sears-Roebuck's Cat. No. 86—1939) 59c, plus postage. Regular length. Rayon and nylon body, mercerized cotton top, heel, and toe reinforced with nylon. Resistance to abrasion: of toe, poor; of high splice, fair. Color bled badly into wash water. Shrinkage considered excessive. **2**

Super Essex (Interwoven Stocking Co.) 55c. Selected irregulars. Regular length. Rayon and cotton. Resistance to abrasion: of toe and high splice, poor. Very little bleeding of color into wash water. Shrinkage considered excessive. **2**

Holeproof Pacer Short (The Holeproof Hosiery Co., Milwaukee) 75c. Rayon and mercerized cotton. Resistance to abrasion: of toe and high splice, poor. Color bled very badly into wash water. 3

Plaid Socks

A. Recommended

Interwoven (Interwoven Stocking Co., N.Y.C.) 75c. Cotton with cotton and nylon toe. Resistance to abrasion: of toe and high splice, very good; almost as good as $1.50 *Phoenix* socks, also rated *AA3*. No bleeding of color into wash water. AA3

Crestwoven (Montgomery Ward's Cat. No. 30—215) 55c (2 for $1.07), plus postage. Mercerized cotton. Resistance to abrasion: of toe and high splice, good. No bleeding (loss of color) into wash water. 1

Westminster (The Nolde & Horst Co., Reading, Pa.) 75c. Mercerized cotton. Resistance to abrasion: of toe and high splice, good. Very little bleeding of color into wash water. 3

B. Intermediate

Pilgrim (Sears-Roebuck's Cat. No. 86—2042) 49c, plus postage. Not listed in current catalog, but description is similar to that of 86—2053 (59c), now listed. Mercerized cotton. Resistance to abrasion: of toe and high splice, fair. No bleeding of color into wash water. 1

Esquire (Chester H. Roth Co., Inc., N.Y.C.) 65c. Mercerized cotton. Resistance to abrasion: of toe, poor; of high splice, good. No bleeding of color into wash water. 2

C. Not Recommended

Westchester (Sold by F. W. Woolworth stores) 39c. Cotton. Resistance to abrasion: of toe, poor; of high splice, fair. Very little bleeding of color into wash water. Shrinkage considered excessive. 1

Retail Prices of Domestic Fuels

IT HAD BEEN the intention to include in the *Annual Cumulative Bulletin* a comparison of fuel heating costs in various cities of the United States. Just about the time the material was going to press, however, substantial increases in prices of several of the major domestic fuels took place, which made many of the data of the table incorrect. The material was therefore withheld from the *Annual Cumulative Bulletin* and was revised in accordance with later information. The data should be of value to many of our readers, particularly to those who may be considering a change to a different fuel than they are using at present, and who, because they will as a rule be using only a single fuel in their own homes, will not be in a position readily to learn the price relationships of the various common fuels.

RETAIL PRICES OF DOMESTIC FUELS IN VARIOUS CITIES OF THE U. S. A.[1]

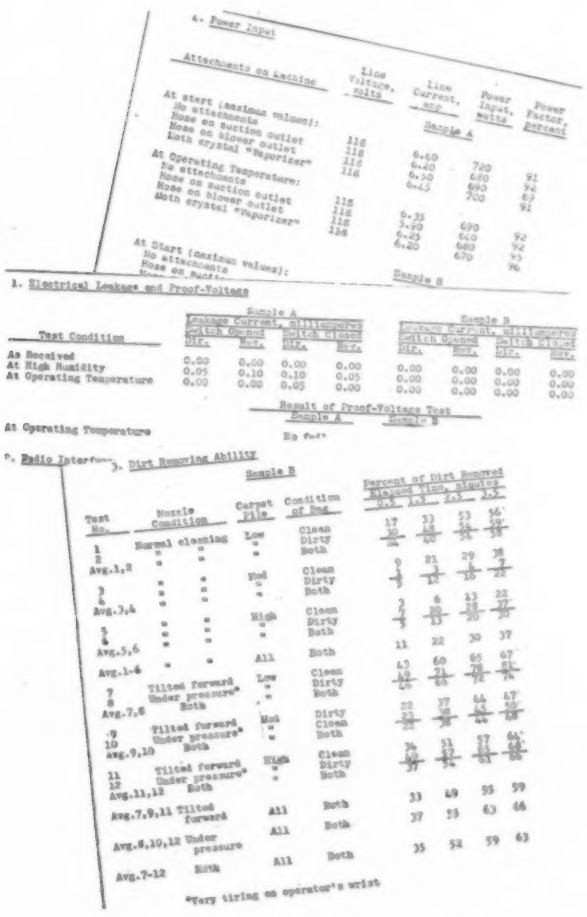
City	Anthracite		Fuel-Oil No. 2	Coke (Nut or Egg)	Bituminous Coal[2]				Gas, House Heating	Other Fuels
					High Volatile		Low Volatile			
	Nut	Buck			Dom.	Stoker	Dom.	Stoker		
Boston	$21.80	$16.00	12.2c	$19.50	—	—	—	$14.55	—	
Baltimore	19.80	14.20	11.7	—[3]	$12.30	$11.60	$12.15	13.50	—	
New York	19.95	13.25	12.7	19.60	—	—	—	13.90	—	
Philadelphia	19.50	13.75	12.0	18.25	—	—	—	—	—	
Buffalo	20.50	14.25	13.8	17.25	—	10.35	—	—	—	
Richmond	—	—	11.1	—	13.90	14.30	14.80	14.85	—	
Atlanta	—	—	—	—	14.60	14.50	—	—	$0.51	
Jacksonville	—	—	13.5	—	18.50	—	—	—	—	
Detroit	20.75	16.35	14.4	19.70	14.30	15.10	15.00	—	0.62	
Cleveland	—	—	—	—	12.90	14.40	16.05	—	0.51	
Chicago	—	—	13.6	20.50	13.05	13.25	15.80	—	—	briquets, $20.45 per ton
Milwaukee	20.95	15.80	14.1	19.25	15.15	15.70	18.05	—	—	briquets, $18.30 per ton
Minneapolis	—	—	14.1	22.30	14.60	14.30	22.30	18.45	0.63	briquets, $20.40 per ton
Kansas City	—	—	12.7	—	10.55	9.90	18.45	12.50	0.45	
Denver	—	—	—	—	11.65	—	—	—	0.45	lignite, $9.50 per ton
Portland, Oreg.	—	—	10.8[3]	—	17.90	15.65	—	—	1.54	sawdust, $5 per 200 cu. ft.
San Francisco	—	—	10.7[3]	—	—	—	—	—	0.34	cordwood (soft), $10.65 per cord

[1]Anthracite prices from Bulletin of Anthracite Institute as of July 20, 1948; all other prices from U. S. Bureau of Labor Statistics Bulletin as of May 15, 1948.

[2]Showing the lowest-priced size available for domestic use in each city.
[3]No. 200 fuel oil.
Prices are per ton (2000 lb.) for coal, per gal. for oil, and per million Btu's for gas.

Vacuum Cleaners—Two New Models

SUBSCRIBERS often write and ask, among other things, why we do not conduct comparative tests of the merits of the revolving-brush and tank-type vacuum cleaners. Other subscribers are interested in the vacuum which a cleaner will produce (a point that is often heavily stressed by vacuum-cleaner salesmen). Some want to know about the efficiency of a cleaner as a health unit in filtering dust and bacteria and the like from the air; others ask about the make of the motor used and its horsepower rating; many other so-called features or sales points are brought up by our correspondents on the assumption that they are of prime importance to the buyer of the appliance. Our answer usually is that since the primary function of a vacuum cleaner is *to remove dirt*, our tests are so directed as to *measure the rug-cleaning ability of the vacuum cleaner.*



4. Power Input

Attachments on Machine	Line Voltage, volts	Line Current, amp.	Power Input, watts	Power Factor, percent
		Sample A		
At Start (maximum values):				
No attachments	118	6.40	720	91
Hose on suction outlet	118	6.40	680	90
Hose on blower outlet	118	6.30	660	92
Both crystal "vaporizer"		6.45	700	89
At Operating Temperature:				91
No attachments	118			
Hose on suction outlet	118	6.35	690	
Hose on blower outlet	118	5.90	640	92
Both crystal "vaporizer"	118	6.45	680	92
		6.20	670	93
				96
At Start (maximum values):		Sample B		
No attachments				
Hose on Suct...				

1. Electrical Leakage and Proof-Voltage

Test Condition	Sample A Leakage Current, Milliamperes: Switch Closed Dirt.	Switch Closed Mois.	Switch Opened Dirt.	Switch Opened Mois.	Sample B Leakage Current, Milliamperes: Switch Closed Dirt.	Switch Closed Mois.	Switch Opened Dirt.	Switch Opened Mois.
As Received	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
At High Humidity	0.05	0.10	0.10	0.05	0.00	0.00	0.00	0.00
At Operating Temperature	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00

Result of Proof-Voltage Test

	Sample A	Sample B
At Operating Temperature	No fail	

3. Dirt Removing Ability

Sample B

Test No.	Nozzle Condition	Carpet Pile	Condition of Rug	Percent of Dirt Removed: Diagonal Direction, Left to Right		Lengthwise, Left to Right	
				Dirt	Mois.	Dirt.	Mois.
1	Normal cleaning	Low	Clean	17	33	53	56
2	" "	"	Dirty	30	46	55	59
Avg.1,2	" "	"	Both	24	40	54	58
3	" "	Med	Clean	9	21	29	38
4	" "	"	Dirty	13	23	35	37
Avg.3,4	" "	"	Both	11	22	32	38
5	" "	High	Clean	3	8	13	22
6	" "	"	Dirty	19	23	35	37
Avg.5,6	" "	"	Both	11	16	24	30
Avg.1-6	" "	All	Both	15	26	39	44
7	Tilted forward Under pressure*	Low	Clean	43	60	65	67
8	" "	"	Dirty	49	71	78	82
Avg.7,8	Tilted forward Under pressure* Both	"	Both	46	66	72	75
9	Tilted forward Under pressure*	Med	Dirty	22	37	44	47
10	" "	"	Clean	33	48	55	58
Avg.9,10	Tilted forward Under pressure* Both	"	Both	28	43	50	53
11	Tilted forward Under pressure*	High	Clean	30	33	37	44
12	" "	"	Dirty	36	46	51	55
Avg.11,12	Tilted forward Under pressure* Both	"	Both	33	40	44	50
Avg.7,9,11	Tilted forward	All	Both	37	53	60	66
Avg.8,10,12	Under pressure	All	Both	35	52	59	63
Avg.7-12	Both	All	Both	35	47	54	59

*Very tiring on operator's wrist

Figure 1—*A small part of the data which are taken during tests on a single vacuum cleaner (middle of sheet includes leakage current data on two makes). The full report on one cleaner runs to as much as 10 typewritten pages.*

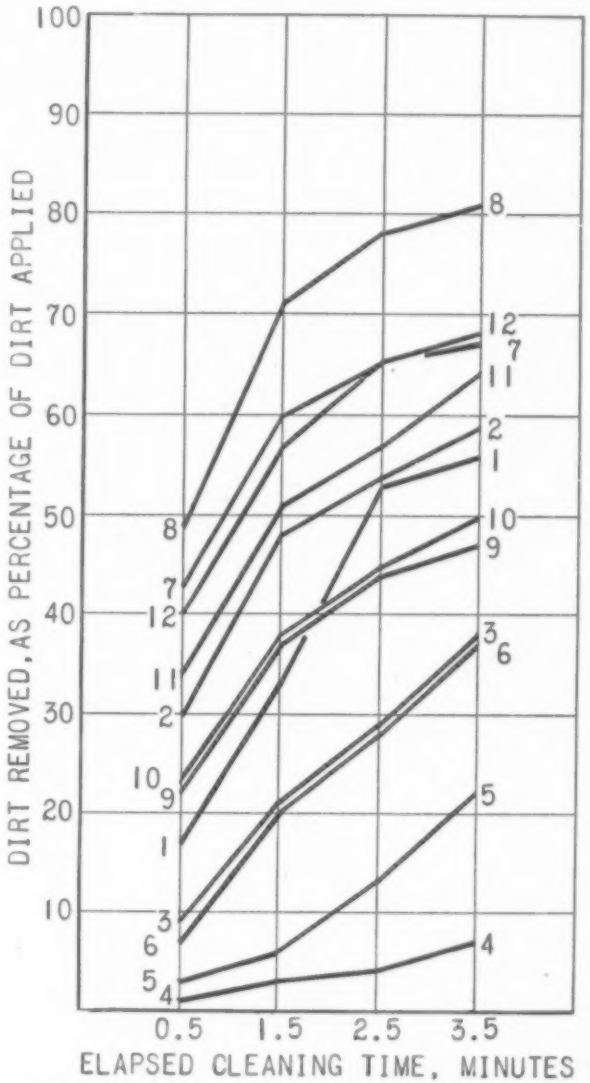


Figure 2—*The data taken from the lower section of Figure 1 are converted to graph form. Each numbered line on the graph refers to the corresponding series of tests (in this case on the* Westinghouse T1-47 *cleaner). The results of tests numbers 1 through 6 (for normal usage of the cleaner) are then averaged and the results as summarized appear in block form at the bottom of Figure 3.*

Choice of *type* of cleaner is left to the individual consumer, because we feel that each type

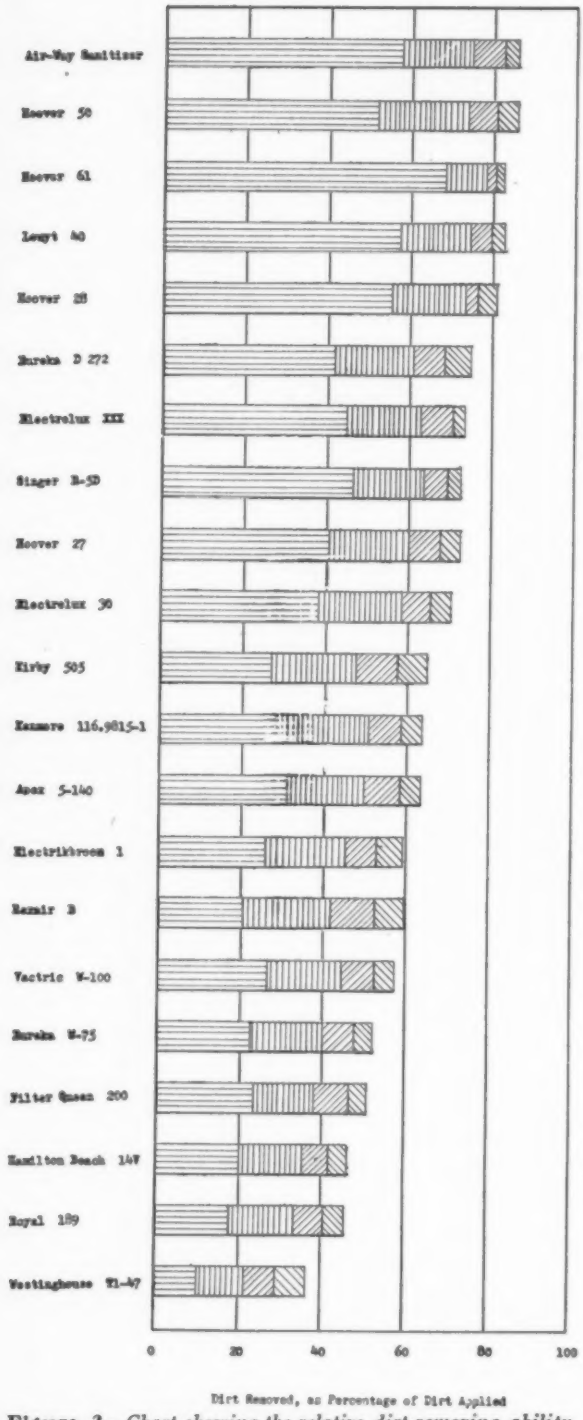


Figure 3—*Chart showing the relative dirt-removing ability of the twenty-one vacuum cleaners which have been tested within the last two years. Average of all tests (low-, medium-, and high-pile rugs, several individual tests on each) for 3-1/2 minutes' application of the cleaner to the rug is shown on chart as follows:*

Percentage of dirt removed from start to 1/2 minute.

Additional percentage of dirt removed from 1/2 minute to 1-1/2 minutes.

Additional percentage of dirt removed from 1-1/2 minutes to 2-1/2 minutes.

Additional percentage of dirt removed from 2-1/2 minutes to 3-1/2 minutes.

has its own characteristic advantages which some hold to be essential as matters of convenience in use and others do not care for, or find unimportant (see CR's March 1947 BULLETIN). Vacuum, as such, in inches of water column is not reported because (contrary to claims often made by salesmen) this figure does not necessarily give any indication of the performance of the vacuum cleaner as a cleaning device. The *Westinghouse* vacuum cleaner in the listings which follow is a case in point. Its motor was apparently at least as "strong" as the motor in the *Electrolux* (530 watts input as against 475 watts input for the *Electrolux*), and on this basis one could assume that it was capable of creating a comparable vacuum (actually it was slightly less, but by no very significant amount). In the most pertinent dirt-removing tests, however, the results were quite variable in the case of the *Westinghouse* (see Figure 2). These differences may have been chiefly a result of the unusual construction of the cleaning nozzle on the *Westinghouse* cleaner in which the designers appeared to have put too much effort into developing a special brush mechanism for lint and surface litter removal which is brought into position against the rug by the user's increasing the pressure on the wand. The design is such that the brush either rides free of or is in contact with the nap of the rug, depending upon the amount of pressure applied to the wand by the user. It appeared that little thought had been given to determining whether the nozzle in the position established when pressure was not applied to the wand picked up dirt efficiently and cleaned a rug well. It seems that there is little doubt that the development of a "sales feature" or "talking point" has taken precedence in the design in this case, as in many others, over good performance of the appliance in doing its primary job of cleaning a rug well and rapidly.

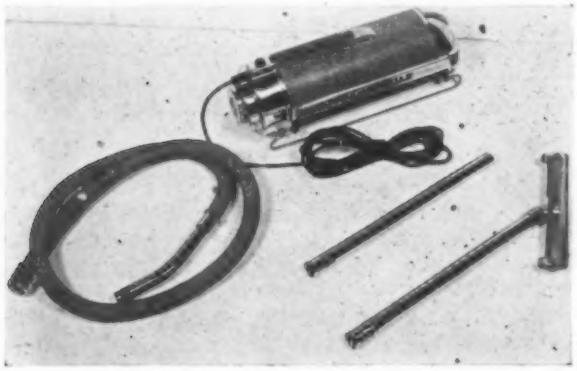
The tests as conducted on the two vacuum cleaners listed were essentially the same as those used in previous tests and reported in CR's BULLETINS for March 1947 and January 1948. Considerable difficulty was experienced in summarizing the test results on the *Westinghouse* due to the varying results obtained on successive trials, as already noted. The position of the *Westinghouse T1-47* on the chart is based upon the test results obtained when the nozzle and wand combination was used in a manner like that used when testing and using other similar type cleaners. Better results

were obtained by tilting the wand somewhat forward or pressing down on it so that the brush was always protruding, but this was a position that would be very tiresome for an operator to maintain.

Both of the cleaners listed were equipped with runners to facilitate pulling them along the floor. Rated watts input in the listings are followed in parentheses by actual watts consumed. Ratings are cr48.

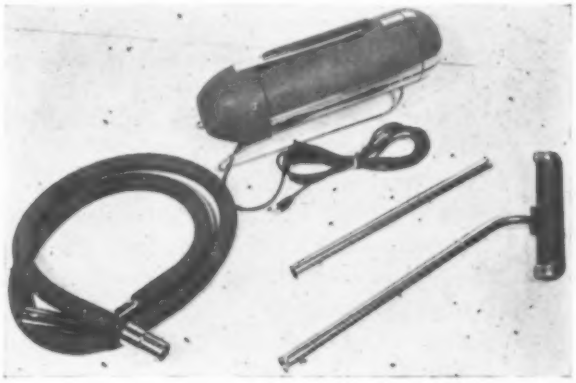
A. Recommended

Electrolux, Model XXX (Electrolux Corp., 500 Fifth Ave., New York 18) $69.75 with attachments. Horizontal tank type. Weight, 13.9 lb. Watts input, 475 (690 maximum). Easily emptied cloth-bag dirt-collector with additional dust filter at opposite end of appliance. Dirt-removing ability, good (about the same as a 1938 model which was retested for the sake of comparison in 1947, although manufacturer claimed much improvement in vacuum in the latest *Model XXX*). Detachable cord, considered an advantage, except that the plug used to fit the cleaner was of special design and would be difficult to replace except from manufacturer's own dealers (undesirable). Switch easily operated by foot or hand. The rug-cleaning nozzle had an adjustment feature which permitted selection of a smooth or sharply grooved rear contact surface (called a "gleaner"). Use of the nozzle with the grooved surface in position caused considerable carpet wear, several grams of carpet nap being detached from used but clean rugs in a few minutes' cleaning time. (On this account, this grooved lint-catching device should not be used except when it is actually needed.) Since the instruction folder supplied with the cleaner failed to describe the proper use of this nozzle, all tests of dirt-removing ability were made with the smooth (ungrooved) rear friction surface in position. Radio interference caused by this cleaner was slight. No shock hazard in sample tested.



C. Not Recommended

Westinghouse, Cat. No. T1-47 (Westinghouse Electric Corp., Mansfield, Ohio) $69.95 including attachments. Horizontal tank type. Weight, 17 lb. Watts input, 530 (650). Easily emptied cloth-bag dirt-collector with additional dust filter between bag and motor. Dirt-removing ability extremely variable (see Figure 2) (dependent upon particular manner in which rug-cleaning nozzle was used — force by which it was pressed against the floor in use, and the angle of the wand in relation to the floor; see discussion in text of article) and considered poor for ordinary usage. On-off toggle switch and floor runners not fastened securely. Radio interference slight. No shock hazard in sample tested.



Drano—Well-Known Drain Cleaner

THE product *Drano* (20c for a 12-oz. can) has recently been analyzed. Today's *Drano* was found to have a different composition than in 1932 when a product of the same name was examined chemically. The approximate composition of the present-day *Drano* is as follows: sodium hydroxide, 53%; sodium nitrate, 43%; aluminum metal, 4%. The presence of the large percentage of sodium nitrate in this product appears to be a new feature. An expert chemist considers that this material has been added to prevent the formation of large amounts of hydrogen in the reaction between the aluminum and the caustic alkali; the purpose is, no doubt, in part to cut down the potential hazard to the user arising from rapid evolution of hydrogen.

Since the drain cleaner is a highly poisonous and caustic substance, it must be stored with great care to prevent its getting into the hands of children, and when use is made of it, every effort must be taken to avoid getting any of the substance on painted or varnished surfaces, or on the body, hands, or clothing, and above all, of getting even the tiniest drop or bit into the eyes.

Do not run hot water into the sink after *Drano* has been poured into the drain; the reaction may be so violent as to constitute a serious hazard. Note that an alkaline drain cleaner may cause interference with the action taking place in a household septic tank.

The College of St. Catherine
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Buying a Piano—I

THE problem of choosing the right piano is an important question to many millions of consumers; at this time, there is a large and active market for pianos in the moderate and middle income groups. Close to 40 percent of the families in the United States now have pianos in their homes.

The accompanying article regarding pianos has been prepared in response to many requests received from subscribers for information that would help them in making the purchase of upright or spinet pianos. The compilation of information in this article has been prepared by a university dean who is himself a pianist conversant with the field after many years in the profession. His investigation of the subject, apart from his own extensive knowlege of pianos and their performance, has included extensive discussion with pianists, teachers, and tuners; it is believed that his views may be accepted as having a high degree of usefulness for consumers who wish to decide upon a type and make of piano for home use.

The topic is particularly timely now because of the excessive and increasing sales of small and so-called spinet pianos. A business magazine refers to a 64-key spinet as "bait for the low-cost market." In its article on the boom in the piano business, now as good as at any time in two decades, the journal says nothing about the quality and general desirability of today's product. This is unfortunate because, to a very marked extent, quantity appears to have taken the place of quality in this trade. The spinet, which is a poor piano from the musical point of view, is a very successful one as a commercial development, for since 1935, small pianos have accounted for the major part of the business, which has gone in for cost-cutting mass-production techniques, and it is said that at the present time, the industry has a backlog of unfilled orders.

Now that production of pianos has begun to approach normal, it might be well to furnish some information for CR readers about the trade in general and some hazards to the buyer in particular. For the layman the purchase of a piano presents a real problem. He may consult some friend within the profession and even persuade this individual to help in the selection of a suitable piano. This procedure is advisable, and should insure a satisfactory outcome. Unfortunately, not all musicians, even pianists, are sufficiently conversant with the trade or the important technical details of construction to furnish more than an opinion regarding tone quality and apparent responsiveness of the action of the new instrument. Most prospective buyers are almost completely at the mercy of the salesman or dealer, whose objective naturally is to make a sale at a good profit.

As in the purchase of an automobile, the piano-using public is influenced largely by the name of the manufacturer. It is to the latter's advantage to build for himself a reputation for reliability in assuring customers of a satisfactory instrument. With pianos the name on the fall-board is often of great significance. Years ago the names of standard makers represented a dependable quality backed by the well-established policies and experience of the company. As years passed, with fluctuations in the economic situation, ownerships of the factories changed hands, sometimes several times. As a result, the quality of a piano today can be judged only by the skill, care, and integrity of its *present* manufacturer.

With the utter confusion in the matter of trade names, how can any amateur hope to secure for himself an instrument that will surely give him a satisfactory return for his money? It would be impossible to give specific foolproof advice that would cover any situation. We would urge, first of all, a position of careful deliberation in reaching a decision in any situation to which the activities of a high-pressure salesman have been directed. A musical instrument that cannot stand on its own qualifications without unethical selling methods cannot be regarded as entirely above suspicion — a fact sometimes overlooked by propagandists for good products. Seeking of advice from professional people and other independent experts in the field is usually to be recommended.

Familiarity with trade names of the better makes is advisable. Beware especially of the so-called "stencil" brand. A large retailer may easily buy a consignment of pianos from a manufacturer who will place the name of the retailer on the fall-board instead of his own. The name of the manufacturer is to be found cast on the metal plate in many of these pianos. A more reprehensible practice is that of placing the retailer's name on the fall-board *with no*

mark on plate or elsewhere to identify the maker. Pianos of this sort are obviously to be avoided, in all cases. A third deception which is difficult to comprehend is the rather common practice of using an old established name without giving any indication of the actual manufacturer. The name of a famous builder of the past may therefore be of little or no guarantee value as to a piano of recent make that may be only a quite indirect descendent of the original product.

At the end of the second part of this article, which will appear in a later BULLETIN, there will be ratings of some American pianos and their manufacturers. Many readers will be surprised at certain items of information implied. It will be observed that many old, familiar names appear as subsidiaries of large corporations. The absorption of these old companies has taken place over the years for a variety of business reasons. In some cases a piano of a given trade name may possess many of the former characteristics of that make. Unfortunately, others have met the fate usual in production for mass distribution under a system of marketing by experts in propaganda and advertising techniques, and have become "assembled" instruments with none of the craftsmanship that made the pianos of an earlier period products of eminent skill of careful and painstaking workmen and designers.

Most homes needing a piano will find even the smaller grands out of reach. The upright is in the lead as the type of instrument found in the average living room. For some years manufacturers have reduced the size of these pianos. This change helps make the piano more practical than the larger pianos for the small house or city apartment, and helps the piano to fit into the scheme of interior decoration. This latter aspect admittedly is of considerable importance to the housewife.

The Small Pianos of Today

Along with reduction in the size of pianos, however, there has come about a deterioration of some of the musical qualities. Shorter strings must naturally reduce resonance and tone quality. Besides, the smaller pianos have a decided tendency to get out of tune quickly. It is almost impossible today to purchase an upright piano comparable in quality to those of a generation ago. The reflection and magnification of each tone from the shorter strings come from a sounding board of decreased size. In the reduction there has of necessity been a comparable loss of power and fullness of tone as well as in timbre or quality. This narrows the "dynamic range" between soft and loud effects to a degree that gives an inevitable monotony to the musical effect. When these pianos are voiced on the soft side there is a lack of brilliance in the purported virtue of "sweetness." When use has hardened the hammers there is inevitable "tinniness." In short, the new style baby upright is deficient in many important details that formerly made a good upright an acceptable substitute for the space-consuming grand piano. Professional pianists and teachers agree that the present conditions are a distinct step backward from the standpoint of piano-playing as an art. In spite of the smaller amount of materials used, prices did not decrease when the size reduction began. Manufacturers claim that increased expense of new styling has made costs of production substantially the same as hitherto. It is sometimes possible to find a secondhand piano of the old type that may prove to be advantageous to the buyer, but it is never wise to buy any old-style used piano without careful examination.

* * *

In view of the fact that there may be a number of consumers who have planned to purchase a piano as a Christmas gift, we are closing this article with a list of the *A-Recommended* pianos, including one spinet, the *Acrosonic*, of unusual quality (as spinets go). A more complete list, including the pianos in other categories, will appear in the concluding section of this article.

A. Recommended

Acrosonic (Baldwin Co., 1801 Gilbert Ave., Cincinnati) A spinet of unusual quality.
Baldwin (Baldwin Co.)
Chickering & Sons (Aeolian-American Corp., 27 W. 57 St., New York 19)
Hamilton (Baldwin Co.)
Howard (Baldwin Co.)
Kimball (W. W. Kimball Co., 306 S. Wabash Ave., Chicago 4) Console pianos.
Wm. Knabe & Co. (Aeolian-American Corp.)
Mason & Hamlin (Aeolian-American Corp.)
Steinway (Steinway & Sons)
Weber (Aeolian-American Corp.)

Two Table-Model Television Receivers

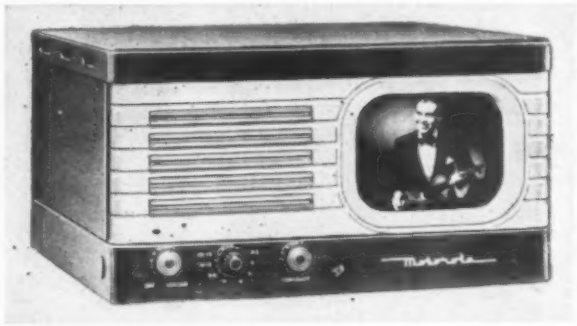
A. Recommended

Philco Television Receiver, Model 48-1001 (Philco Corp., Tioga and C Sts., Philadelphia 34) $349.50 plus installation and service charge. 26 tubes used plus 10-in. picture tube. Power consumption, 275 watts. Picture size, 6-1/8 in. x 8¼ in. Magnetic focus and deflection used. Provision for two antennas, one for the lower frequency TV channels (2 to 6 — channel No. 1 is no longer assigned to television) and one for higher frequency TV channels (7 to 13), using 300-ohm balanced-type transmission line. Due to inability to obtain proper focus, over-all picture quality was slightly inferior to that obtained on *Philco*, Model 48-700, or *RCA 8TS30*. Slight tendency to drift beyond limit of frequency control circuits on channel 13, considered relatively unimportant. Picture fidelity, or the ability of the receiver to reproduce the picture as televised, considered as good as is possible at present time. Picture stability, excellent. Station selector switch and other tuning controls on front were considered easy to operate. Those additional controls which are needed, but require only occasional adjustment, were conveniently located behind a spring-hinged door on the front of the cabinet (rather than at the rear as is the case in many receivers), a good idea. Station selector switch provided for reception on 8 of the 12 channels presently used and would require a readjustment by a service technician if one or more of the 4 channels not originally set up were desired. (Considered a satisfactory arrangement at the present time in all except certain fringe areas that lie between two different television service areas.) Sensitivity (TV channels) considered good (about the same as the *RCA* and *Philco 48-700* previously reported, CR Bulletin of October 1948). Audio output, 2.5 watts at 10% distortion, considered good for a table-model receiver but poor when compared with a good console-model radio. 6-in. speaker used. Quality of audio output, slightly better than that of *Philco*, Model 48-700, due to better speaker baffling in larger cabinet, giving improved bass response. Sensitivity of sound channel was adequate to provide good audio quality with any picture that might be received. Leakage current was present but not excessive. **3**

B. Intermediate

Final listing following tentative *C* rating in October 1948 Bulletin, page 16.

Motorola Television Receiver, Model VT-71, MH Series (Motorola Inc., Chicago 51) $189.95 plus installation and service. 17 tubes plus 7-in. picture tube, and crystal detector. Picture size, approximately 26 sq. in. Power consumption, 110 watts. Used new "intercarrier" circuit which allows a reduction in the number of tubes used and at the same time provides a fixed intermediate frequency for the sound system so that the inherent disadvantages in difficulty of tuning which are present in many of the FM receivers used for reception of the sound in television receivers are mostly eliminated, and also resulting in a non-critical adjustment of the vernier tuning control for the elimination of sound-channel distortion. Picture detail, much improved over other similar model of this set previously tested, but limited slightly when compared to *Philco 48—1001*. Picture brilliance, good, and considered better than that obtained from the *Philco*, Model 48-700. Some vertical "jitter" present, which can be a cause of eyestrain. General stability of synchronizing circuits with regard to drift, satisfactory. The vernier, which was incorporated in connection with the station selector switch in the MH series of this model (was not present on original models tested) was somewhat confusing to operate, but allowed for a manual correction of tuning drift which, in some degree, is almost bound to occur in present TV receivers. The front panel control arrangement operated satisfactorily. Sound quality equivalent to average small table-model radio, a common weakness of today's TV receivers in this price class. Sensitivity of sound channel was adequate to provide good audio quality with any picture that might be received. One side of the incoming power line was apparently connected directly to the chassis, which put chassis and some rear controls at full line voltage in one position of plug and was definitely dangerous. **1**



Cumulative Index for Consumers' Research Bulletins
July 1948 through December 1948

(Vol. 22, No. 1 through Vol. 22, No. 6)

Single BULLETINS are available, at 30 cents. The month of issue is followed by the number of the page or pages on which the item appears.

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	Month	Page
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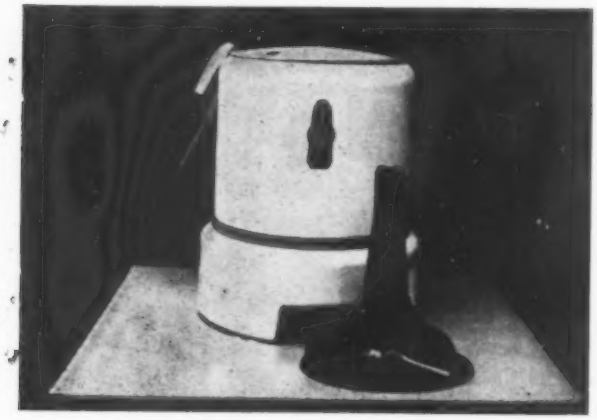
Two Small "Personal" Washing Machines

Including One with a Spinner Drier

IN HOMES where the main laundry is sent out, or where light "in between" washings are desirable, a well-designed small washer, sometimes called a personal washer, can be a handy appliance. However, as a sole means of washing, even for a very small family, or a person living alone, the usefulness of the small washer is limited not only because of its small capacity (1 to 3 pounds of dry clothes) but also because



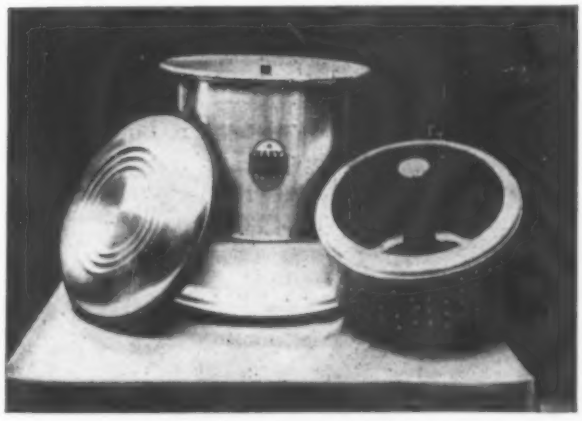
Whirlpool Personal Washer

of its inherent unsuitability for washing large pieces such as sheets.

Effectiveness in washing depends, to an important extent, upon the ability of the soapy water to surge freely through and around the fabrics, to remove the dirt lodged on the surface and within the weave structure. If the washer is overloaded, the water does not have the needed freedom to flow rapidly and in all directions; likewise if the material is folded so tightly that the surging is impeded in the innermost folds, washing effectiveness will be reduced, or at the best, washing results will be uneven. Not only would two standard sheets constitute a full load for a three-pound machine, but the placing of a single sheet, on account of its bulk, would have to be done with considerable care to avoid tight folding, which would give reduced effectiveness in cleansing.

In designing and building a small washer, the manufacturer actually faces all of the problems present in larger standard machines plus some additional ones occasioned by the smaller size and space of the "personal" machines. A selection thus needs to be made with at least as much care as in the purchase of a full-sized washer. Above all, it should be stressed that the number of gadgets, "eye-catchers," or even substantial features of the machines is no measure of value, at all, especially since limitations of space, weight, and cost may have forced a sacrifice of more essential qualities, particularly washing ability, in order to allow their inclusion.

A good example of this point is the inclusion of the spinner drier basket on the Easy *Whirldry* Washer. However effective it may be — and CR's tests showed wringing results about 25 percent better than hand wringing — the fact remains that the inclusion of the drier reduced the potential capacity of the washer from three pounds of dry clothes to two pounds, or by one-third. In the opinion of CR, this limitation is considerably more important, from the standpoint of most users, than the convenience of having a spin-dry device to remove a part of the water from a small quantity of clothes.



Whirldry Personal Washer

On the other hand, the *Whirlpool* Washer of the Nineteen Hundred Corporation includes a small drain pump. Its short length of discharge hose (29 inches) will permit pumping to a level of only 8 inches above the top of the machine, and this so limits the location of the washer in relation to a tub or sink that it would appear to be almost as advantageous, for most users, to place the washer on a table beside the

sink and drain by gravity. Another disadvantage of the pump is that the agitator cannot be disengaged while the pump is running.

A series of tests on the *Whirldry* spinner dryer showed that its effect was achieved within about one minute or a little longer; operation beyond about 2½ minutes did not remove any significant additional amount of water.

B. Intermediate

Whirlpool, Whirlette, Non-Automatic Small Sized (Personal) Electric Washing Machine (Nineteen Hundred Corporation, St. Joseph, Mich.) $57.45. 1/15 hp. a-c motor. Weight, 28 lb. Load capacity, 3 lb. of dry clothes (about 1/3 that of standard-sized machines). 6 gal. of water required to fill to marked level. Storage space required, 16 x 16 x 20 in. (allowing about 2 in. for clearance of drain hose at top). Exterior finish, white lacquer; interior, anodized metal. Fixed hose, effective length about 29 in., for either gravity or pump draining. Starting switch and clutch for power pump are provided; the latter is not marked for operating position. (Hand-operated detachable wringer is available but was not tested.) Easily removable oscillating plastic agitator operates at 67 cycles per minute through an arc of about 180 degrees. Washing effectiveness, good; uniformity of washing throughout the load, good; tumbling action of load, excellent. Power pump drained the washer in 1 minute 30 seconds as compared with 1 minute 10 seconds (minimum) for gravity drain. Operation reasonably quiet and free from objectionable vibration. Found satisfactory in leakage-current and proof-voltage tests. Electrical energy consumption, about 90 watt-hours per hour of washing operation (0.3c at 3.5c per kwhr.); or 5 watt-hours per pound of clothes washed 10 minutes. No visual indication of wear on the clothes after 100 hours' endurance test. No visible wear or corrosion of the washer noted after 100 hours. Motor overheated quickly under the severe condition of operating with a tub full of clothes and with the water level low. Handles provided at the base for lifting the machine should be made more comfortable by further rounding of the metal. **3**

C. Not Recommended

Whirldry, Model H-47 (Easy Washing Machine Corp., Syracuse) $59.95. 1/12 hp., 6000 rpm., ac-dc motor (a disadvantage, when to be used only on a.c.). Weight, 28½ lb. Load capacity, 2 lb. of dry clothes. Approximately 7 gal. of water required. Storage space required, 17 x 17 x 18 in. Exterior finish, spun aluminum tub, lacquered base; tub interior, spun aluminum. Drains by gravity. Starting switch provided but not marked for "on" or "off." Inner aluminum basket 12½ in. in diameter by 7½ in. deep holds clothes and either oscillates or spins according to whether a washing or drying action is desired. Change of motion is accomplished by releasing clutch button on center post and raising basket about one inch. The design of this clutch is such that in the spinning position, the basket merely rests on the post to engage its splined shaft, with nothing to hold it down but its own weight. When a high speed was reached, the basket, due to a fault of design, sometimes rose sufficiently to become disengaged from the splined shaft and interrupt operation. Washing effectiveness, poor; washing effectiveness was uneven in various parts of the load; tumbling action throughout the load, very poor. Operation was not as quiet as the *Whirlpool.* During the spinning cycle, even with the most careful loading, the vibration was great, so that the machine had to be held in position; operating free it not only "walked" but rotated so that the electric cord was soon wrapped around the base. Spinner judged to be potentially dangerous especially to children as it could be operated with lid removed (prevented by mechanical device on most regular-size washers). Effectiveness in drying was good when full speed operation was obtained, with water equal to about 85 to 100% of the weight of the dry clothes left in the clothes. Electrical energy consumption was about 133 watt-hours per hour of washing (0.5c), with an average dry clothes weight of 2 lb. Because of poor performance of this machine in washing tests, no endurance test or measurement of wear on clothes was made. **3**

Household Caulking Compounds

A HOUSEHOLD caulking compound is essentially composed of a filler such as asbestos, clay, whiting, or the like, in an oil which may be either of the drying (such as linseed) or non-drying type or a combination of both. Unlike putty, which usually contains a drying oil only, and which therefore eventually hardens and loses its power of adhesion to surfaces, a good caulking compound of the kind under discussion should retain its plasticity and adhesive qualities indefinitely.

Caulking compounds are sold in sealed cans, ordinarily, and are obtainable in three grades. The *knife* grade is of relatively stiff consistency, making it suitable for application with a putty knife. The *gun* grade is a thinner product, designed for application with a pressure gun similar to a grease gun; this variety is considered more suitable for use by builders than by householders. The third is an all-purpose type which can be applied with either knife or gun.

A modification of the knife type is made with a smaller proportion of oil, and is extruded by

the manufacturer into a long cord or rope about one-quarter inch in diameter; this type the householder applies by pressing it into cracks with the fingers. Because the cord type is wound on a spool and distributed in cardboard boxes, the oils used must be mainly of the non-drying type, otherwise the material might harden before reaching the consumer.

For anyone not experienced in the use of putty, application of the knife type of compound is a messy and tedious process, and may not always be successful. It is a simple matter, however, to push the cord type of caulking material in tightly with the fingers and produce an effective job, though the work can be arduous if the cord happens to have reached a relatively dry and tough stage. This type costs approximately twice as much as the others, per unit of volume, but it is believed that for caulking by the amateur its convenience of application and the saving in time and material may often justify its use where the amount of work to be done is not great. A material for this type (*Mortite*) was found satisfactory for sealing steel casement windows. Applied in December, it necessarily was removed each time the windows were opened for cleaning, but the same pieces were replaced, and served throughout the entire winter. In such an application, use of the knife-applied type of caulking material would be impracticable.

Tests were made to determine the elasticity of the compounds, their ability to adhere to surfaces, and their behavior when subjected to tension produced by shrinkage of unseasoned lumber nailed to seasoned lumber and forming a trough in which the caulking compound was applied. The tests are believed to approximate reasonably closely the conditions found in newly constructed houses. Important differences in effectiveness were found among the different compounds. The prices are those actually paid; different prices, however, may be charged for different colors. The color names are those used by the manufacturers; the whites, for example, were considerably off a true white.

A. Recommended

Kalk-Kord All Purpose Caulking and Glazing Compound (Presstite Engineering Co., 3900 Chouteau Ave. St. Louis 10) Cord type, 89c per 60-ft. roll; gray. Contained a non-drying oil and asbestos fiber filler. Did not shrink or crack on drying. Pulled away from wood, under tension; adhesion to surfaces was fair. Plasticity after drying, good. Very easy to apply; no tendency to stick to hands. **3**

Mortite Utility Tape (J. W. Mortell Co., 534 Buick St., Kankakee, Ill.) "Cord" type, $1.25 per 80-ft. roll; gray. Like *Kalk-Kord* except that oil appeared to be a mixture of petrolatum and a small amount of drying oil. Upon extended aging, *Mortite* can be expected to become slightly harder and less elastic than *Kalk-Kord*. **3**

Pecora Calking Compound (Pecora Paint Co., Philadelphia) For use in a caulking gun, $1.40 per 1-qt. cartridge; cream white. On drying shrank slightly to form a concave surface, but continued to adhere to the wood; did not crack on drying. Did not pull away from wood, under slight tension; best of all types tested in that respect. Ease of application, good. **3**

B. Intermediate

Sterling Elastic Caulking Compound (Sterling Paint & Varnish Co., Malden, Mass.) Knife or gun type, 96c per 1-qt. can; black. Shrank by pulling away from walls, and formed concave surface, like *Pecora*; did not crack on drying. Pulled away from wood, under tension, but less than some others. Adhesion to surfaces was good. Considerable sticking to hands and knife, but was easily applied, nevertheless. **1**

Wards Certified Caulking Compound (Montgomery Ward & Co., Chicago) Knife type, 79c per 1-qt. (4-lb.) can; gray. On drying shrank slightly to form a concave surface, but continued to adhere to the wall; did not crack on drying. Did not tend to stick to hands or knife. Easy to apply. Good results on all counts except that it cracked under tension. **1**

C. Not Recommended

Calbar Master-Caulk Plastic Caulking Compound (Calbar Paint & Varnish Co., Philadelphia) Gun type, 79c per 1-qt. can; white. Shrank considerably on drying to form a concave surface, but maintained adherence to wall; considerable cracking on drying. Adhered well to wood, under tension, but cracked worst of any compound tested. Easy to apply. **1**

Sco-Co Plasticseal (Southport Paint Co., Inc., Savannah, Ga.) Knife or gun type, 79c per 1-qt. can; buff. Shrank considerably on drying, forming concave surface, but adhered very strongly to surfaces. Did not crack under tension. Very sticky and stringy, and was quite hard to apply neatly with a knife. Priming with linseed oil required on bare wood, concrete, brick, and stucco (disadvantageous). **1**

Sears Master-Mixed Glazing and Caulking Compound (Sears, Roebuck & Co., Chicago) Knife type, 79c per 1-qt, can; gray—color actually tan after aging. Slight shrinkage. Did not crack on drying. Plasticity of dried compound, poor. Tendency to crumble and pull on the knife made application difficult. Requires priming with paint or linseed oil (spar varnish or shellac, on brick or unpainted wood surfaces)—disadvantageous. Product was more like a putty than a caulking compound. **1**

Kaukit (L. Sonneborn Sons, Inc., N.Y.C.) Knife type, $1.10 per 1-qt. can; white. Shrank by pulling away from walls of trough; did not crack on drying. Pulled away from wood, under tension. Adhesion to surfaces, fair to good. Plasticity when dried, only fair. Stuck slightly to hands and knife. Easy to apply. **2**

Second Report on Columbia's New Long-Playing Records

THE major question to be answered regarding the long-playing or *Microgroove* records is, "Are they superior to the standard pressings and in what ways do they excel?"

In the preliminary quest for the answer to this question it was found that users of the long-playing records were reporting quite varied results. Some were enthusiastic and thought they were "great"; others said, "not so good." This suggested that the quality of the equipment used for reproducing the records might be a major factor in determining listening quality, assuming, of course, a certain minimum and dependable degree of quality in the manufacturing of the records themselves.

With this as background, a test procedure was adopted and carried out as follows, in one of a series of tests recently completed. Both standard (78 revolutions per minute) and long-playing (33⅓ rpm.) commercial records were used for comparison purposes. They were played over equipment of studio quality in a professional sound-recording studio and also over what might be called equipment of "ordinary" quality situated in a room without any sort of wall treatment for sound quality. Duplicate turntables in each case were fed into a single amplifier. Instantaneous switching was provided so that either the long-playing or regular record could be heard at will. The test records were new 78 rpm. and LP versions of Columbia album MM-607. The preamplifiers used were adjusted so that the recording characteristics of the records were correctly compensated.

First Test, with Top-Grade Playing Equipment

Using the studio quality equipment consisting of high-quality magnetic pickups with .001- and .003-inch radius sapphire styli, *Presto* 33⅓ rpm. turntables, a 40-watt *Altec-Lansing* studio recording and monitoring amplifier feeding an *Altec-Lansing* two-way reproducer (Model 604) in its manufacturer's regular cabinet, it was generally agreed by the jury of musically experienced and expert listeners that: (1) the long-playing records were significantly quieter; (2) showed significantly wider frequency response, especially in the high register; (3) gave noticeably "clean" reproduction of the highs as against a noticeable lack, rather than distortion, of highs in the regular pressings; (4) showed less difference in quality between the outer and inner grooves—quite possibly caused by the fact that the long-playing records used for the test had not been recorded too closely to the center; (5) beyond any question, had wider dynamic range. The occasional "ticks" from static electricity or dust which are apparently characteristic of the long-playing records (and of vinyl record material) were judged according to the taste of the listener as less objectionable than the steady low "hiss" of the 78 rpm. record. The resultant effect on the noise background of blowing dust on the records and then removing it with a slightly moistened soft cloth was considered slightly or barely greater in respect to the LP's than the effect on the regular pressings.

Second Test, with Ordinary-Grade Playing Equipment

Next, a playing system of more ordinary grade was used, consisting of a *Green-Flyer* two-speed center-driven turntable ($16.50), a *Shure 900MG* pickup ($7.50 complete) with crystal cartridge, for use with the *Microgroove* records, an *Altec-Lansing 323B* amplifier, and a *Stephens* two-way speaker system. (A 12-inch *Jensen* in a small cabinet was also used during part of the test in order to simulate home equipment even more closely.)

The opinions offered, under these conditions, as to the comparison between the two kinds of records were that the long-playing records (1) gave less hiss; (2) noticeably wider-high-frequency response; (3) sounded noticeably cleaner at the high end, with more highs present; (4) showed very considerably more dynamic range, but (5) presented a bass response which was almost intolerably muffled by turntable rumble.

It was concluded that to be enjoyable to owners of wide-range equipment, the long-playing records should be played on quieter turntables than the one used in the second series of tests (those on ordinary-grade playing equipment) if even a moderately wide audio response range is to be used, although some im-

The Long Playing or *Microgroove* recordings are apparently gaining considerably in popularity throughout the country. The reason for this is readily explained by the desire of consumers for records that would play for much longer than the eight minutes of the standard 78 rpm. 12-inch records made by Victor, Columbia, Decca, and others.

The long-playing (LP) records require only 1/4 to 1/6 the storage space and provide high-fidelity reproduction at up to 40 percent lower cost (per minute of playing) — with no saving at all, in some cases. It appears that the LP records have a promising future if this system of reproduction is adopted by other record manufacturers, assuring a standard for competitive lines, and if the playback equipment which is made available to the general public is of reasonably good quality (better than now offered), meeting, among others, the very necessary requirements of low needle pressure (1/5 oz. or less), very low turntable rumble, and a pickup of high-fidelity quality, as good as the *Pickering* or *Clarkstan*.

provement was made in the second test by limiting the bass response through use of a smaller speaker mounted in a smaller baffle.

It appears that the wide use of the new records by persons who are particular about quality of reproduction is going to depend mostly upon the grade of the reproducing equipment used. Low-priced equipment of the kind used in the second test described will probably give listeners accustomed to table-model or $200-$300 console quality (post-war prices) as much "hearing satisfaction" as the regular 78 rpm. records, plus the advantage of long playing time and minimum storage space. A player having very low turntable rumble, if and when obtainable, with a pickup properly fitted and balanced, with a high-quality cartridge, will probably give outstandingly better results than can be had with the present 78 rpm. records.

A few precautions addressed to the purchaser of LP *Microgroove* equipment are in order. The low mechanical output from these very finely grooved records will necessitate careful elimination of hum and other noise in associated equipment. Most (though probably not all) crystal pickups will give sufficient output from the long-playing records to drive medium to high gain amplifiers, but careful shielding and grounding will be necessary if low-gain high-quality magnetic pickups, such as the *GE*, are used, and it appears at this time that the higher-level, high-quality magnetic cartridges, such as *Pickering* or *Clarkstan*, are to be preferred for this use. Maintenance of the proper 5-gram or 1/5-ounce needle pressure is also extremely important, and if maintained (and styli promptly replaced when worn), it does not appear that record wear will be a significant factor. (Record wear was not discernible after 100 plays on one test record using the *Philco* player, and this is considered indicative of excellent performance for any pickup.) It has already been noted that the effect of dust accumulation on the LP's is likely to be rather greater than on the standard shellac pressings, and, for this reason, better than ordinary care in storage of LP records is indicated.

Making Your Christmas Tree Safer

A FIRE at Christmas time always seems particularly tragic, since it comes during a time of general happiness and celebration. Unfortunately, a Christmas tree is a major fire hazard, and the risk is especially great when the tree is used in a church or school or other public gathering place.

The most convenient and satisfactory method for reducing the hazard is to keep the base of the Christmas tree standing in plain water (with no chemicals added). This simple treatment has the added advantage of checking the discoloring and falling of the needles.

For some years, the use of chemical solutions has been suggested to reduce the hazard of a tree's catching fire; in some cases this led, not unnaturally, to the idea that the trees so treated had been fireproofed, and that therefore no special precautions need be taken to prevent their ignition. Actually, recent studies by the U. S. Forest Service have shown that both spruce and balsam fir trees treated with ammonium sulfate solution (formerly generally recommended as a fire retardant chemical for Christmas trees) were more flammable than trees having their bases simply immersed in

water, and the chemical treatment had the further disadvantage of causing early discoloration of the needles. (Ammonium sulfate is still a standard fire retardant for other purposes.)

At present, the best suggestion known to CR is that coming from the Forest Products Laboratory, U.S. Forest Service, which advises: Obtain a tree which has been cut as recently as possible; cut off the end of the trunk diagonally, at least one inch above the original cut end; then stand the tree at once in a container of water with the water level at all times above the cut surface. (Tree stands with a water reservoir in which the trunk may be set are commonly available in department stores, 5-and-10-cent stores, and mail-order houses, for indoor use.)

It is advisable to keep the tree outdoors until it is actually needed, and where circumstances permit, to place it in a relatively cool, moist corner when it is brought indoors, away from a radiator, register, stove, fireplace, or other source of heat. When the tree has become dry, it should be taken down and disposed of outdoors, without delay.

General Precautions

It should be remembered that even though a tree has been placed in water as recommended by the U.S. Forest Service, it will not resist any large source of heat. Therefore, *all the usual precautions to prevent fires should also be taken.* Don't ever permit candles to be used on a tree and, of course, be particular that it is not placed near a fireplace that is in use or might under any circumstances be used. Check the wiring and insulation of your Christmas tree lights by careful inspection before attaching them to the tree.[1] In placing decorations, keep them well away from the lights and from the lamp sockets. Don't use cotton under a tree unless it has been chemically treated to make it fire resistant, and remove all gift wrappings from under and near the tree as soon as possible. *Turn off the lights on the tree before leaving the house or going to bed.*

[1]Readers interested in Christmas tree lighting sets may wish to refer to CR's BULLETIN of December 1947 (30c). In that BULLETIN, useful information about the lamps is given, and 20 sets of various makes were rated: 2 as *A. Recommended*; 17 as *B. Intermediate*; and 1 as *C. Not Recommended.*

Good Radio Receivers are Few— None Are Available at Lower Price Levels

A correspondent in Delaware expressed a view that we hope may be typical of the point of view of many consumers, when he wrote:

> I have been very much interested in your recent articles on radio-phonograph combinations, high fidelity reproduction and FM tuners.
>
> I am one of the many potential customers for a new radio combination, but refuse to pay $400 or more to get same. Since reading your recent article on the good FM tuner now available at $30 I have decided that the thing to do is to buy a straight AM radio with automatic record player, same to be console cabinet type, with no short wave or any other frills. Since I am located in an area where many stations are easy to reach, I am interested primarily in tone, either what you refer to as high-fidelity or a reasonable approach to same.

A good many subscribers write letters asking about the quality of radio receivers in the $100 to $300 price class on the assumption that first-class receivers can be bought at this price level at the present time. This is not the case, and we have made enough tests of the lower priced receivers that we are fairly certain the consumer need expect to find nothing of high quality at price levels below about $400-$500. Whereas a good radio phonograph with record changer of the late pre-war period could be bought from at least one national distributor at a price as low as $185, there is no parallel offering at the present time, or anything even approximating such good performance at a price up to about $400.

This is most unfortunate from the consumers' standpoint, but it reflects the facts as we find them, and we find it necessary to emphasize this, for many people who write in about radio do so on the assumption that if we just tested some more receivers of other makes and models we would surely find something of high fidelity warranting an *A* rating at $150.

There is some hope, however, that at least some progressive manufacturers will go to work on the problem of furnishing good radios and radio-phonographs at prices which are not greatly in excess of those charged before the war (beyond the amount necessary to be added because of greatly increased wages, costs of material, etc., which all manufacturers must pay nowadays).

Off the Editor's Chest

(*Continued from page 2*)

literature which concedes that the less expensive bicycles are inferior to the fine English bicycles or not fully suited for use by grownups (that is, by people who are *not* full of excess energy and who happen *not* to love gadgets).

In another case, a distributor of men's shirts complained about the "*C. Not Recommended*" rating that his brand, selling at $2.95, had received, saying that it was unfair to compare it with a shirt selling at $3.95 which had received an "*A. Recommended*" rating. When we pointed out, however, that two shirts in the "*A. Recommended*" group sold at $2.44 and $2.79, respectively, he admitted that his $2.95 shirt had on occasion been priced as low as $1.88. This was apparently intended to prove that his shirt was a "low-end product" and under no circumstances to be compared with shirts at $3.95. The person buying the low-priced shirt would not, of course, be informed in any such case that low-quality was meant to go along with the low price.

Sometimes a manufacturer likes to think that his particular product is in a class by itself, quite apart from other makes which serve a similar function, because his contains an ingredient that "makes it different." In a test of 20 brands of toilet soap, one which admittedly contained tar failed to meet the requirements for a good toilet soap as set by Federal Specification for Milled Toilet Soap, P-S-621a, one of the standards by which CR has long rated toilet soaps. The company making this particular brand took the position that since it was not possible for a soap containing pine tar to meet these specifications, it was unfair to apply them to their product, or to judge it by the same criteria as applied to standard toilet soaps. As there are no special standards for evaluating the quality of a tar soap, the manufacturer was in effect suggesting that his brand was in a special class by itself and should somehow be exempt from comparison with other soaps used for washing the face and hands, and other parts of the body.

We had difficulty in making the absurdity of this position clear to the company's representative with his naturally personal attitude toward the product, but it will be evident to intelligent consumers that no one should be enabled to set his product apart from the rigors of competitive rating merely because he chooses to introduce an ingredient that happens to make it fail to conform to customary standards and quality requirements.

The irrationality of the manufacturer's argument from the consumer's standpoint will be apparent to anyone who shops at a well-stocked grocery or drugstore where six or eight brands of toilet soap are stacked side by side, including the one in question. If tar soap were sold only on prescription by a physician or dermatologist, there might be some basis for the company's claim that it is a special and exceptional product, and for that reason should not be expected to meet the standards of ordinary toilet soap. Actually this soap, like the many other toilet soaps on the market, is bought by the consumer as just one kind of toilet soap, and is certainly not assumed by him, in so far as he considers the matter at all, to be inferior to any other popular soap in any respect.

Competition, except in baseball, football, and other sports, is something that a good many businessmen shun like a plague. Yet these are often the same businessmen who while verbally defending the "American system of business" as far superior to anything offered by Communism or Socialism, are all too often unaware that what distinguishes the productive American enterprise system from either of the other "planned" economic systems is the *powerful influence and drive of competitive activity* that are a part of the American heritage.

From the consumer's point of view, competition is something we need more of, in many places and situations. It should be restored, indeed, to many activities from which it has even been excluded by various actions and regulations of federal and state governments. It should be fostered and encouraged in nearly every activity of economic life, as it was in the days before the "economic planners" and policy makers applied their techniques to our national economy. There is too much propaganda being disseminated from business, government, and labor sources that competition is uncivilized, barbarous, a cut-throat practice, and that "stabilization" of the market and ruling out of all sorts of price-cutting and similar activities make for a far more desirable type of economy. There is no doubt that as the sellers' market tends to disappear, the consumer himself will force a marked increase in competition on both the price and quality levels. Consumers should not permit themselves to be fooled by attempts of either businessmen or government officials to make it appear that it is an undesirable practice to hold a business or productive enterprise to the grindstone of competition and to subject products to competitive ratings of grade and quality.

Stainless Steel Cooking Utensils

SOME years ago, CR conducted tests on stainless ware with the idea of determining the comparative resistance of utensils of various brands to food acids and salt. There is a growing appreciation of the importance of consuming foods which are not contaminated with metallic substances derived from cooking utensils, particularly salts of copper and chromium, and the hazard of such contaminations has been one of the main reasons why certain types of utensils have practically gone out of use. (Enamelware involves the same problems, since a number of metallic compounds are used in formulating the vitreous glaze. Studies on enamelware utensils from the same standpoint have been made in previous years.)

In conducting this new study, it was found, as in the earlier experiments, that substantial amounts of material were dissolved from the utensil in some cases. The ware most susceptible to such solution showed 70 times as much chromium loss to the liquid in one case as dissolved from the one least objectionable in that respect. With two brands, considerable amounts of nickel were found, whereas in four of the brands, none was found in the analysis of the salty acidulated liquid boiled in the vessel.

STAINLESS STEEL cooking utensils have the advantages of ranking high in resistance to accidental damage and to wear, and greater ease in cleaning, when compared with utensils of glass, aluminum, and enamelware. Their disadvantages are high cost, relatively poor heat conductivity, and a tendency to be dissolved to some extent by some foods cooked in them.

Salt and acids, which include most fruit juices, have a tendency to corrode most of the metals that are included in stainless steels; as a result, some of the compounds of the metals so dissolved are taken into the stomach with food cooked in stainless steel utensils. Most stainless steels contain chromium and nickel as alloying elements; like all steels, they also contain at least small amounts of carbon, manganese, phosphorus, silicon, and sulfur.

Chromium in many of its chemical compounds, particularly chromates, is toxic. Gastric symptoms begin to appear with doses of 0.03 gram, and larger amounts fed to animals act upon the central nervous system, inducing convulsions and paralysis. Not much is known about the toxicity of nickel when taken internally; some authorities hold that it is relatively harmless and might be freely used in cooking utensils. While less toxicological work has been done on nickel than on most of the common metals, it has been definitely related to the disease psoriasis, and enough work has been done on food contaminations to show that it is present in small quantities in many kinds of foods and beverages. (It is used in the hydrogenation of unsaturated vegetable oils to make the common household and commercial shortenings. It is also used extensively in nickel-plated articles in pasteurizing and food and beverage canning and bottling plants.) Nickel seems to have the peculiar property that after a sensitivity to it has once been developed or there has been an undue exposure to the substance, a peculiar susceptibility to skin diseases and disorders occurs. Even the handling of nickel coins or contact with the frame or rim of spectacles of white gold containing nickel as an alloying metal has been the cause of eczema or allergic disturbances. The toxicity of nickel when taken internally is not known precisely, but is generally considered to be insignificant. Nickel in contact with the skin, however, is known to cause an eczema or allergic disturbance to many persons, so that there appears a possibility that it may have harmful effects if taken into the stomach.

Of the brands of utensils tested, all except the *Farber Ware* contained small amounts of molybdenum. The range was large, from 0.026% in the case of *Norris Thermic Ray* and *Commonwealth Everbright* to 0.239% in the case of *Ekco Ware*. With respect to molybdenum, the information available is even less complete and conclusive than that regarding nickel. Molybdenum salts act as slow poisons, but their toxicity is not great; they may produce chronic poisoning by accumulation (as lead and arsenic do). One authority refers to molybdenum as having a higher toxicity than chromium compounds, which would certainly put it in the class of materials highly undesirable for use in any relation to foodstuffs. Other authorities assert molybdenum is almost as poisonous as arsenic. The U. S. Public Health Service, on the other hand, in a recent study using

guinea pigs as test animals, came to the conclusion that molybdenum compounds have a low order of toxicity. The toxicity found, however, depended greatly upon the nature of the compound in which the molybdenum was offered to the animals used in the tests.

CR's tests on six brands of stainless steel utensils were begun early in 1948, to determine which were most resistant to being dissolved by the types of chemicals found in food. The method used was one which was intended to produce in accelerated fashion the dissolving of material from the vessel that would be produced by certain types of cooking, particularly where fruit acids and salt are present. Equal amounts of a solution containing 4% of tartaric acid, 2% of acetic acid, and 2% of sodium chloride (common table salt) were boiled in each of the utensils for one-half hour. At the end of that time the liquid was allowed to cool for one hour, and then was analyzed for chromium and nickel. During the boiling, a reflux condenser was attached to each dish to keep the concentration of the solution constant during the test.

As in the similar tests reported in the CR BULLETIN for June 1941, the amounts of chromium and nickel dissolved from the different utensils varied over a wide range. Chromium varied from 0.28 milligram from the best utensil to 20.5 milligrams for the worst; nickel varied from none found to 19.3 milligrams, the latter amount being found in the same sample of solution that contained 20.5 milligrams of chromium.

The utensils were examined for dulling and spotting after the test, but the results did not correlate well with the chemical analyses of the solutions; this may perhaps indicate that removal of iron, rather than removal of one or both alloying metals, was the principal cause. Whatever the principal cause, however, spotting or pitting indicates that corrosion has started, and when once started it may be expected to proceed more rapidly. It will probably be sound policy, where the cost is not important, to discard a stainless utensil which no longer retains its smooth interior finish, or that shows signs of pitting or corrosion.

The ratings must be considered as tentative, because there is no assurance that any manufacturer will continue to use the same variety of stainless steel, particularly in these times when steel is scarce and the source of supply has to be shifted in many cases from time to time.

The utensils are listed in order of increasing amounts of chromium dissolved. It was found that when the amount of chromium dissolved was high, the amount of nickel dissolved was high also. The samples were bought for test in Canadian stores, whence prices, as noted, are in Canadian dollars. (To convert Canadian dollars to approximate equivalent in American dollars, multiply by 9/10.)

B. Intermediate

Thermic Ray (Norris Stamping & Mfg. Co., Los Angeles) $7.50 (Canadian) for 2⅝-qt. saucepan. Chromium, 0.3 mg.; nickel, none found.

Lewis 1927 Stainless Ware (Stainless Ware Co. of America, Detroit) $2.49 (Canadian) for 1¾-qt. saucepan. Chromium, 0.3 mg.; nickel, none found.

Revere (Revere Copper & Brass, Inc., Rome, N. Y.) $7 (Canadian) for 4¼-qt. saucepan. Chromium, 0.35 mg.; nickel, none found.

Farber Ware (S. W. Farber Co., Brooklyn, N. Y.) $2.95 (Canadian) for 1⅜-qt. saucepan. Chromium, 0.6 mg.; nickel, none found.

C. Not Recommended

Commonwealth Everbright (a Canadian brand) $1.75 (Canadian) for 1-qt. saucepan. Chromium, 1.3 mg.; nickel, 17.5 mg.

Ekco Ware (Ekco Products Co., Chicago) $5.95 (Canadian) for 1⅜-qt. saucepan. Chromium, 20.5 mg.; nickel, 19.3 mg.

Automobiles

Oldsmobile Futuramic, Packard Custom, Lincoln 121, and Lincoln Cosmopolitan

Identification

In the following listings, the *Brake Factor* is a number indicative of the probable relative life of the brake linings; this is important from the standpoint of safety of the car and cost of maintenance. The figures are obtained by dividing the total area of the brake linings in square inches by the curb weight of the car plus 750 lb. (450 lb. for the smaller 4-passenger cars) and multiplying by 1000 (to avoid fractional numbers). *Engine Revolutions per Mile* gives a rough measure of the probable or expected rate of engine wear. Piston displacement in thousands of cubic inches per mile divided by 2 is a number that gives an approximate measure of economy in use of gasoline and oil. *Performance Factor* is a measure of the relative ability of the car to respond quickly and powerfully when the accelerator pedal is depressed. This figure is obtained by dividing the maximum horsepower of the car by its curb weight plus 750 lb. (which represents the average added load in cars of normal size, for five passengers), and multiplying the result by 1000 (to avoid fractional numbers). The larger the number, the higher the relative "performance." It should be noted that this method of judging a car assumes that the gear ratio and tire size have been adjusted by the manufacturer's engineers so that maximum car speed occurs at an engine speed just a little above the speed at which maximum horsepower is developed.

This report is not based on exhaustive tests (which could not in any case have been carried out in time for the information to be useful to our subscribers), but on the opinions of several well-qualified engineers, supplemented by a careful study of specifications and reports of performance in the field. Present ratings are necessarily tentative and subject to change as fuller data are received and have been studied and checked, and after consumers in considerable number have had actual road experience for a considerable period with the cars involved.

Subscribers who wish to compare these cars with others previously reported and to learn more about the various features of the 1948-1949 cars should refer to the discussion and tabular listings of 46 models in CR's September 1948 BULLETIN.

Price Group 4

B+

Oldsmobile Futuramic 98. $2151 f.o.b.; $2230 delivered N.Y.C. Engine: 8 cylinder, L head, 3¼ in. bore x 3-7/8 in. stroke; 257 cu. in. displacement; 115 hp. at 3600 rpm.; taxable hp., 33.8; compression ratio, 7.0 to 1. Engine oil capacity, 6 qt.; cooling water, 20.5 qt. Gasoline tank capacity, 19 gal. Gear ratio, 4.3 to 1 (with *Hydramatic*, 3.9 to 1). Battery, 15-plate, 100-ampere-hour (rather small). Wheelbase, 125 in.; over-all length, 213 in. Tire size, 7.00 x 15 (overloaded by about 7%—about average). Brake area, 181 sq. in.; brake factor, 39. Engine revolutions per mile, 2990 (2710 with overdrive). Piston displacement in thousands of cubic inches per mile divided by 2, 385 (with overdrive, 350). Performance factor, 24.6. Weight, 3925 lb. (price per lb., 57c). With *Hydramatic* drive, would rate *B*—.

Price Group 5

A

Packard 8 Custom. $3750 f.o.b.; $3835 delivered N.Y.C. Engine: 8 cylinder, L head, 3½ in. bore x 4⅝ in. stroke; 356 cu. in. displacement; 160 hp. at 3600 rpm.; taxable hp., 39.2; compression ratio, 7.0 to 1. Engine oil capacity, 7 qt. Gasoline, 20 gal.; cooling water, 20 qt. Gear ratio, 3.9 to 1. Battery, 17-plate, 120-ampere-hour. Wheelbase, 127 in.; over-all length, 212½ in. Tire size, 8.20 x 15 (adequate). Brake area, 208 sq. in.; brake factor, 42. Engine revolutions per mile, 2500. Piston displacement in thousands of cubic inches per mile divided by 2, 445. Performance factor, 32.0. Weight, 4210 lb. (price per lb., 77c). Judged a fine car, in high-priced class.

B–

Lincoln 121 (1949). $2681 f.o.b.; $2850 delivered N.Y.C. Engine: V-8 L head, 3½ in. bore x 4⅜ in. stroke; 337 cu. in. displacement; 152 hp. at 3600 rpm.; taxable hp., 39.2; compression ratio, 7.0 to 1. Engine oil capacity, 6 qt.; cooling water, 34.5 qt. Gas tank capacity, 19½ gal. Gear ratio, 3.9 to 1 (3.1 with over-

drive). Battery, 17-plate, 120-ampere-hour. Wheelbase, 121 in.; over-all length, 212½ in. Tire size, 8.20 x 15 (adequate). Brake area, 204 sq. in.; brake factor, 42. Engine revolutions per mile, 2500 (1990 with overdrive). Piston displacement in thousands of cu. in. per mile divided by 2, 420 (with overdrive, 335). Performance factor, 31.5. This and the *Lincoln Cosmopolitan* are entirely new cars in which the integral-body-and-frame design has been abandoned in favor of a heavily reinforced K and X type frame; the full torque-tube drive has been replaced by Hotchkiss drive; rear springs are now of longitudinal-leaf type; front springs are of coil type with *Sizaire* independent wheel suspension and simplified anti-sway stabilizer. Weight, 4100 b. (price per lb., 63c).

Lincoln Cosmopolitan (1949). $3344 f.o.b.; $3650 delivered N.Y.C. Engine, same as used in *Lincoln 121*. Gas tank capacity, 21½ gal. Wheelbase, 125 in.; over-all length, 220 in. Tire size, 8.20 x 15 (overloaded about 9% — about average). Brake factor, 38. Performance factor, 28.5. Weight, 4600 lb. (price per lb., 79c).

Note: A number of cases of minor troubles have been reported on both *Lincolns*, believed to be due to poor and careless assembly.

★ ★ ★ Corrections and Emendations to Consumers' Research Annual Cumulative Bulletin and Monthly Bulletins ★ ★ ★

Anti-freezes
Col. 430
ACB '48-'49

The two anti-freezes, *Gulf* and *Shellzone*, listed as *A. Recommended* should be rated *B. Intermediate.*

Col. 431
ACB '48-'49

Through typographical error, *Frezpruf* was misspelled *Frezprof*.

Lawn Mowers
Page 6
July '48

Change rating of *Clemson E 17* from *B. Intermediate* to *C. Not Recommended*. Several reports have been received that the plastic handle is not sufficiently strong, and some have broken, rendering the mower useless until a new handle could be supplied. In one case at least, replacement of the handle was made without charge to the purchaser.

Vacuum Cleaners
Col. 44
ACB '48-'49

Under *References*, at end of section: The March 1948 and May 1947 dates should read March 1947 and May 1948, respectively.

Electric Hedge Trimmers
Col. 55
ACB '48-'49
and
Page 17
July '48

Delete listing of *Pincor*, Model P-17, and substitute following which refers to the later, improved *Model P17-A*:

B. Intermediate

Pincor, Model P-17A (Pioneer Gen-E-Motor Corp., Chicago) $32.50. Weight, 7 lb. 2 oz. Blade, 11½ in. long. Rated watts, 115 (120). Cut satisfactory, but not quite as good or as easy to handle as *A-Recommended* hedge trimmers.

Page 2
Oct. '48
and
Nov. '48

The volume numbers were inadvertently given as "23" at the top of page 2 of the October and November 1948 BULLETINS. The correct volume number is **22**, and thus the page 2 head of the October and November BULLETINS should read Vol. 22 • No. 4 and Vol. 22 • No. 5, respectively.

Outboard Motors
Evinrude Sportwin
Pages 8 and 9
June '48

Change rated hp. from 3.3 at 3500 rpm. to 3.3 at 4000. Change piston displacement from 6.6 cu. in. to 6.2 cu. in. Delete clause in listing ". . . which, coupled with unusually low piston speed of 800 ft. per minute, should favor long life." Actual piston speed of the motor tested was 1000 ft. per minute. The incorrect figures given in the article were based on the manufacturer's detailed printed specifications, which it was found, after the article was issued, referred to an earlier model to which the maker had assigned the same brand or model name. Clearly, manufacturers should recognize their obligation to distinguish new models definitely from all previous ones, when significant changes are made. In this case, the model tested and the earlier model were both merely designated as *Evinrude Sportwin*, which is decidedly against the interests of the consumer, and can be a cause of a serious error in judgment on the part of any user.

Outboard Motors
Martin "40"
Page 9
June '48

In table change bearing area in sq. in. per hp. from 1.7 to 2.1.

Page 10
June '48

Change listing of *Martin "40"* from *C. Not Recommended* to *B. Intermediate.*

Change fuel tank capacity from 2.5 qt. to 3.2 qt.

Delete following clause: "and relatively high piston speed did not suggest the long service life some other makes should give."

The piston speed of the *Martin* was approximately the same as that of the *Evinrude* as corrected above.

Delete the following clause: "Had far greater number of parts than other motors tested." This statement was based on an estimate; an actual count, according to Martin Motors, revealed that the *Martin* had fewer parts than the *Evinrude.*

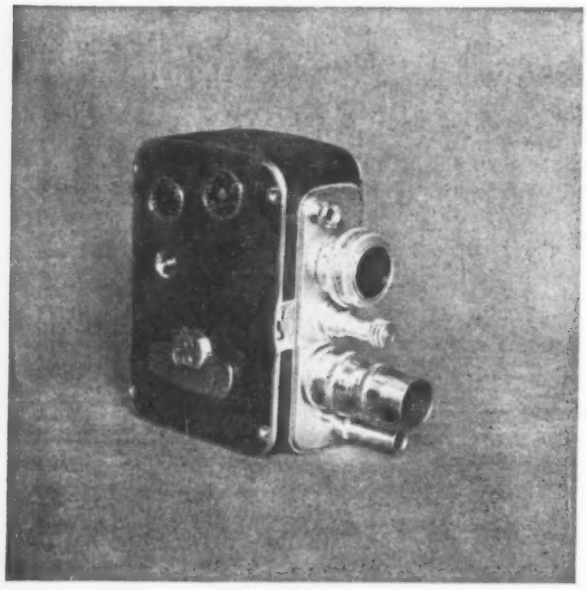
Cameras and Photographic Equipment

Motion Picture Cameras

8 mm.

B. Intermediate

Filmo Auto-8 (Bell & Howell Co., Chicago) $253.90 with two lenses plus $42.30 federal excise tax. Total price $296.20. Equipped with *Bell & Howell Super Comat* f:1.9 lens, focal length 0.5 in., and *Bell & Howell Telate* f:3.5 lens, focal length 1.5 in., both coated, both in focusing mounts. Takes standard *Kodak* magazines. Speeds 16, 24, 32, 48, and 64 frames per second, with provision for exposing single frames. Turret holds both lenses and matching view-finders which turn into place when turret is turned. Fairly convenient exposure calculator mounted on side of camera. Quality of lenses, very good. Mechanical construction, excellent. Judged one of the best 8 mm. cameras available, but as even the best 8 mm. cameras produce pictures which are inherently seriously inferior to those made with 16 mm. cameras, this camera is given a *B-Intermediate* rating. 3



Filmo Auto-8

16 mm.

B. Intermediate (high)

Revere Magazine 16 mm. (Revere Camera Co., Chicago) $127.50 with f:2.5 lens. Equipped with *Wollensak-Revere* f:2.5 *Cine Raptar* fixed focus lens of 1-in. focal length. Speeds of 12, 16, 24, 32, and 48 frames per second, with provision for single-frame exposures. *Micromatic* finder provides for use of either standard 1-in. focal length lens or a 3-in. focal length telephoto lens. Motors, smooth in operation, and ran about 15 ft. of film per winding, but slowed down near end of run. Lens quality, fair. Mechanical quality, good. With somewhat better lens, and positive film-stop, would warrant an *A* rating. 2

Miniature Cameras

B. Intermediate (high)

Ikonta 35 (Carl Zeiss, Inc., 485 Fifth Ave., New York 17) $83, including case and federal tax. Made in American zone of Germany. *Novar* (3-element) f:3.5 lens of 45 mm. focal length. *Klio* shutter with rated speeds of 1/250, 1/100, 1/50, 1/25, 1/10, 1/5, 1/2, 1 second, and bulb. Built-in synchronizing device. Definition of lens very good, for a 3-element lens. Shutter speeds, approximately proportional. Mechanical construction, excellent. Bulk and weight relatively low compared with many 35 mm. cameras. Because a lens on a 35 mm. camera must be of superior quality to permit necessary enlargements of satisfactory quality, it was not possible to rate the camera *A. Recommended.* Used 20- or 36-exposure cartridges of perforated 35 mm. film. Picture size, 24 x 36 mm. (1 in. x 1½ in.). 2

C. Not Recommended

Argus C-3 (Argus, Inc., Ann Arbor, Mich.) $74.71 with flash gun and "ever-ready" case, including federal excise tax. *Argus Cintar* f:4.5 lens, 50 mm. focal length. Focusing by helical mount, which moved entire lens. Rated shutter speeds of 1/10, 1/20, 1/30, 1/50, 1/100, 1/200, and 1/300 second. Built-in range-finder and flash-synchronizing contacts. Camera appeared to be identical with the 1946 model tested by CR except that diaphragm stops were marked in the conventional American series instead of the European system used in the earlier model. Range-finder was correct and in agreement with scale. Synchronizer gave adequate exposure. Quality of lens, poor (indicating failure of manufacturer to reject unsuitable lenses, as lens of a second sample tested gave somewhat better results). It is interesting to note that a lens of the same *Cintar* brand name, listed in CR's May 1948 Bulletin, used on the *Argus Markfinder*, was of very good quality. Shutter speeds, approximately proportional. Although both cameras operated properly, they were judged to be mechanically crude, compared with the best quality miniature cameras, and were inferior mechanically to the *Argus Markfinder.* Used 20- or 36-exposure rolls of perforated 35 mm. film. Picture size, 24 x 36 mm. (An *Argus* with a lens as good as the better of the two tested by CR would warrant a *B* rating.) 2

35 mm. Single-Lens Reflex Camera

B. Intermediate

Kine Exacta, formerly *Kine Exakta* (Ihagee, Dresden, Germany; distributor, Haber & Fink, 12 Warren St., N.Y.C.) $274.90, including "ever-ready" case and federal excise tax. f:2.8 *Carl Zeiss Tessar* lens of 50 mm. focal length Focal-plane shutter (cloth curtain type) with rated speed of 1/1000, 1/500, 1/250, 1/150, 1/100,

1/50, 1/25 second, bulb, and time; also 1/5, 1/2, 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, and 12 seconds by use of supplementary dial; delayed action could be used on all high speeds and some of slow speeds. Focusing by helical mount that moves entire lens. Interchangeable lenses available, each in its own focusing mount. Image is viewed on a screen consisting of a plano-convex lens with fine ground or etched surface with magnification of about 1.5x. (Additional magnifier in hood available, to be folded down over central portion of image.) Had built-in flash synchronizer jacks. Camera equipped with externally operated knife for cutting off exposed sections of film. Mechanism of camera completely inoperative until focusing hood is erected into position for use. Then a single lever winds film into position, winds shutter, and sets the mirror. Definition of lens not equal to that of selected pre-war *Tessars* or of selected f:4.5 *Kodak Anastigmat Special* lenses as used on *Kodak Bantam*. Shutter speeds were found to be approximately proportionate. Design, substantially indentical with that of sample tested in 1938 which sold at $125 (less than half the price of present model), but materials and workmanship were somewhat inferior on new model; mechanical operation, however, was smooth and satisfactory. (With an excellent lens, camera would not have warranted an *A* rating because reflex cameras in the 35 mm. size are extremely difficult to focus—even by persons of exceptionally good vision, and with use of a magnifier.) Used standard 20- or 36-exposure cartridges of 35 mm. perforated film. Picture size, 24 x 36 mm. **3**

Imitation Reflex Cameras

B. Intermediate

Ansco Rediflex (Ansco Division, General Aniline & Film Corp., Binghamton, N.Y.) $14.70 for camera, $3.20 extra for flash unit, including federal excise tax. Slow double lens about f:11 and 65 mm. focal length. Fixed focus. Simple shutter with one instantaneous speed and bulb. Single stop. Had contacts for operation of flash unit. Finder, about 1¾ in. square. Case of plastic (see note below). No tripod socket. Lens quality only fair, not as good as should have been afforded by the double lens; quality was below that of *Ansco Clipper*, although lenses are presumably similar — probably result of poor assembly in manufacture rather than difference in design. Takes 12 pictures each 2¼ in. square on No. 620 film. **3**

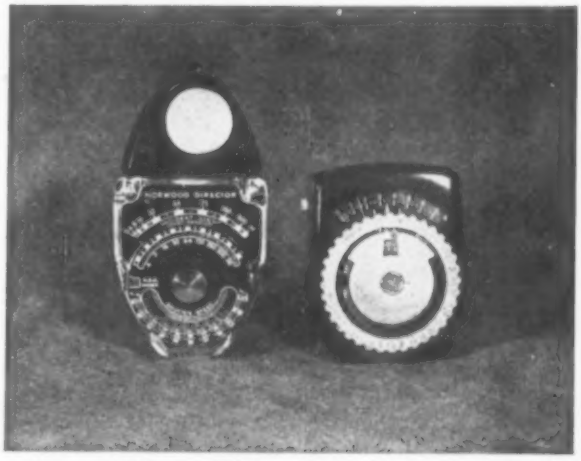
Kodak Duaflex (Eastman Kodak Co., Rochester 4, N.Y.) $13.50 for camera, $2.90 for flash unit, including federal excise tax. Slow single lens of about f:14 75 mm. focal length. Fixed focus. Simple shutter with one instantaneous speed and bulb. Single stop. Had contacts for operation of flash unit. Finder, about 1½ in. square and lacked hood. Case made of plastic (see note below). One tripod socket. Lens quality only fair, found inferior to that of *Baby Brownie Special*, probably result of poor assembly in manufacture. Takes 12 pictures each 2¼ in. square on No. 620 film. **3**

Note: Cameras made of some kinds of plastic are not safe against damage if left exposed to high temperatures, as, for example, in hot rays of the sun (e.g., on automobile shelf); at temperatures sometimes reached in a closed car in summer, some plastic cases will be considerably deformed and the camera perhaps rendered useless.

An *Agfa Panda* camera exhibited this fault; dealers say that the public tends to avoid cameras of plastic, which are likely to be easily breakable, if not subject to damage when exposed to high temperatures.

Exposure Meters

An exposure meter of the photoelectric-cell type is by no means a substitute for judgment and skill in determining exposure; in fact, it is at best *of very limited value*, and helpful only to one who knows its limitations and can therefore use it correctly. This is evident when it is known that readings of different meters of at least one of the best known makes may vary over a range of 2 or 3 to 1, in some cases by as much as 10 to 1, and that many meters show an early loss of calibration. Even apart from this unreliability, the notorious inaccuracy of camera shutter speeds and other factors making for variations in the exposed negatives, make photoelectric exposure meters of any sort far less precise and reliable devices than most users assume. Moreover, because of the great exposure latitude of modern film,



Norwood Director (left) and *GE*, Model PR-1 (right) Photoelectric Exposure Meters

exact exposures are not at all essential, and moderately experienced amateurs can estimate outdoor exposures as well as if they used a meter. Even color film (having short "exposure range" as compared with ordinary film) can be exposed correctly without any need for a meter simply by giving attention to the directions packed with each roll.

B. Intermediate

General Electric, Type PR-1 (General Electric Co., Schenectady, N.Y.) $32.50, including federal excise tax. Designed for use with either still or motion-picture cameras. Meter has two ranges with a ratio of 16 to 1. A button when released permits the operator to hold the pointer at the light value obtained. (The much advertised "memory" feature.) Can be used for measuring directly incident light instead of reflected light by use of an extra accessory which reduces amount of light reaching the photoelectric cell. A satisfactory meter for those who feel they must use a meter of this type, but judged to be less versatile than GE's *Model DW-58* (listed as *B. Intermediate* in *Annual Cumulative Bulletin*), which sells for about $12.50 less. The *DW-58* can be used to measure incident light, by the use of 3 "range-multiplying" masks, available at 70c each. **3**

Norwood Director, Model B (Distributed by American Bolex Co., Inc., 521 Fifth Ave., New York 17) $32, including federal excise tax. Designed and promoted to measure "incident light." A *Photogrid* attachment, usable in an "emergency"—of a kind not explained in the literature—for measuring "brightness range" (reflected light measurement) is available at extra cost ($3.19 including tax). A hemispherical shell of diffusing material covering photocell is claimed to give a more accurate indication of the illumination than is afforded by other meters. The *Norwood* has two ranges, with a ratio of about 30 to 1. Incident light readings obtained were in substantial agreement with those given by a *GE*, Model DW-58; the test did not suggest any reason to consider the *Norwood* meter superior in any essential respect to the *GE* meter. Some tendency for disks to slip from desired setting, which could result in over- or underexposure. In spite of claims such as "most accurate, most consistent, quickest, easiest," "definitely better," "best for the novice," judged to be no more practical in actual use for work by photographic amateurs than other widely-used photoelectric exposure meters. **3**

The "Ultra-Mike"

MANY consumers are attracted by advertisements for inexpensive gadgets which appear in popular scientific, experimenters', and hobbyist magazines.

The *Ultra-Mike* tested was essentially a small radio transmitter with built-in microphone, powered by dry batteries. Some of the claims made for it in various advertisements were that it had "dozens of uses" and would play "through any radio within 75 feet" and give "instant portable communication with no connecting wires, no adapting, or disturbing of your radio." Another claimed "broadcasts through any radio — indoors — outdoors — anywhere. . . completely self-contained wireless transmitter — a marvel of modern electronic engineering. Talk into it — sing into it — and *without plugging in — without connecting wires* your voice comes booming through any radio set within a 50-foot radius" with "full-bodied volume." In addition, one advertisement stated that "Ultra-Mike is not a toy — it's a rugged, scientifically engineered transmitter in mike form that gives high fidelity performance." It is available at most radio parts distributors and some retailers and was purchased with the idea of checking up on some of the claims made for it in advertising. Naturally, a device of this type could be useful if it performed well in the home.

The *Ultra-Mike*

Actual performance, however, fell quite short of these claims, inasmuch as reception was not consistent even when the device was located 15 to 20 feet away from the radio; and connected as recommended, quality of reproduction was very poor, a long, long way from "high fidelity," and the radio could not be used for program listening at the same time the device was to be used, as some might infer.

C. Not Recommended

Ultra-Mike (Mercury Electronic Laboratories, Inc., Chicago) $6.63 with batteries (available for 110-volt a.c. or d.c. at $8.33). Would appear to be of little use, except possibly as a toy or "gadget," when connected as instructed. *If connected directly to the radio antenna post*, by means of a wire (as directions indicate may be done), it might possibly be useful in a sick room or in other situations of a temporary nature, but even for this use, an inexpensive "intercommunication set" would, we judge, be far more satisfactory in nearly all cases.

Ratings of Motion Pictures

THIS section aims to give critical consumers a digest of opinion from a wide range of motion picture reviews, including the motion picture trade press, leading newspapers and magazines—some 19 different periodicals in all. The motion picture ratings which follow thus do not represent the judgment of a single person, but are based on an analysis of critics' reviews.

The sources of the reviews are:

Box Office, Charm, Chicago Daily Tribune, Cue, Daily News (N.Y.), *The Exhibitor, Harrison's Reports, Motion Picture Herald, National Legion of Decency List, Newsweek, New York Herald Tribune, New York Times, Parents' Magazine, Release of the D.A.R. Preview Committee, Successful Farming, Time, Variety* (weekly), *Weekly Guide to Selected Motion Pictures* (National Board of Review of Motion Pictures, Inc.), and *Unbiased Opinions of Current Motion Pictures* which includes reviews by the General Federation of Women's Clubs, the American Legion Auxiliary, National Film Music Council, and others.

The figures preceding the title of the picture indicate the number of critics who have been judged to rate the film A (recommended), B (intermediate), or C (not recommended) on its entertainment values.

Audience suitability is indicated by "A" for adults, "Y" for young people (14-18), and "C" for children, at the end of each line.

Descriptive abbreviations are as follows:

adv—adventure
biog—biography
c—in color (Technicolor, Cinecolor, Trucolor, Magnacolor, Vitacolor, etc.)
car—cartoon
com—comedy
cri—crime and capture of criminals
doc—documentary
dr—drama
fan—fantasy
hist—founded on historical incident
mel—melodrama
mus—musical
mys—mystery
nov—dramatization of a novel
rom—romance
soc—social-problem drama
trav—travelogue
war—dealing with the lives of people in wartime
wes—western

A	B	C		
—	5	6	**Abbott & Costello Meet Frankenstein**	*com A*
1	4	3	**Act of Murder, An**	*dr A*
—	4	5	**Adventures of Gallant Bess**	*wes-c AYC*
—	8	8	**Another Part of the Forest**	*dr A*
—	10	—	**Apartment for Peggy**	*dr-c A*
—	1	2	**Appointment With Murder**	*cri-mel A*
1	3	13	**Arch of Triumph**	*war-dr A*
—	7	9	**Are You With It?**	*mus-com AY*
—	4	3	**Argyle Secrets, The**	*cri-mel A*
—	6	—	**Arizona Ranger, The**	*wes A*
—	—	3	**Arkansas Swing, The**	*mus-com AYC*
—	3	3	**Assigned to Danger**	*cri-mel AY*
2	7	8	**Babe Ruth Story, The**	*mus-biog AYC*
—	—	3	**Back Trail**	*wes AYC*
—	3	10	**Bad Sister**	*nov A*
—	4	1	**Behind Locked Doors**	*mel A*
—	12	5	**Berlin Express**	*war-mel AY*
—	5	1	**Best Man Wins**	*com A*
—	—	4	**Betrayal, The**	*mel A*
1	4	11	**Beyond Glory**	*dr A*
—	6	4	**Big Punch, The**	*dr A*
—	—	7	**Big Town Scandal**	*mel AYC*
—	11	2	**Black Arrow, The**	*adv AY*
—	2	4	**Blanche Fury**	*mel-c A*
—	2	1	**Blazing Across the Pecos**	*mus-wes AYC*
—	1	7	**Blind Desire**	*dr A*
—	3	3	**Blonde Ice**	*mel A*
—	4	1	**Blondie's Reward**	*com AYC*
—	3	3	**Bodyguard**	*mel AY*
—	3	3	**Bold Frontiersman, The**	*wes AYC*
—	9	6	**Brothers, The**	*dr A*
—	—	6	**Campus Sleuth**	*mus-com AY*
—	10	3	**Canon City**	*doc-cri-mel A*
—	2	3	**Carson City Raiders**	*wes AYC*
—	3	2	**Champagne Charlie**	*mus-com AY*
—	4	4	**Checkered Coat, The**	*mel A*
—	1	3	**Clandestine**	*war-dr A*
—	1	6	**Cobra Strikes, The**	*cri-mel A*
—	4	3	**Code of Scotland Yard**	*cri-dr A*
1	8	1	**Coroner Creek**	*wes-c A*
—	3	1	**Corridor of Mirrors**	*dr A*
—	4	2	**Counterfeiters, The**	*mel A*
—	1	5	**Creeper, The**	*mel A*
—	—	3	**Crossed Trails**	*wes AYC*
1	11	3	**Cry of the City**	*mel A*
—	4	1	**Dammed, The**	*war-dr A*
—	2	5	**Daredevils of the Clouds**	*mel AY*
—	13	4	**Date With Judy, A**	*mus-com-c AY*
—	2	5	**Day of Wrath**	*mel A*
—	1	2	**Dead Don't Dream, The**	*wes AYC*
—	12	4	**Deep Waters**	*dr-c AYC*
—	3	—	**Desperadoes of Dodge City**	*wes AYC*
—	—	5	**Docks of New Orleans**	*cri-mel AY*
—	7	9	**Dream Girl, The**	*com A*
—	1	8	**Dreams That Money Can Buy**	*fan-c A*
—	10	—	**Dude Goes West, The**	*wes-com AYC*
2	16	1	**Easter Parade**	*mus-com-c AYC*
—	6	5	**Embraceable You**	*cri-mel A*
3	13	2	**Emperor Waltz, The**	*mus-com-c AY*
—	1	6	**Enchanted Valley, The**	*dr-c YC*
—	4	7	**End of the River**	*dr A*
—	7	7	**Escape**	*nov A*
—	3	2	**Eyes of Texas, The**	*mus-wes-c A*
—	6	5	**Feudin', Fussin', and A-Fightin'**	*mus-com AYC*
—	—	3	**Fighting Back**	*mel AYC*
—	10	7	**Fighting Father Dunne**	*dr AYC*
—	—	3	**First Opera Film Festival**	*mus-dr A*
—	3	6	**Fledermaus, Die**	*mus-com-c A*
—	—	3	**Foolish Husbands**	*com A*
—	8	9	**For the Love of Mary**	*mus-com AY*
4	10	4	**Foreign Affair, A**	*mus-com A*
1	12	2	**Four Faces West**	*wes-dr AYC*
—	3	2	**Fric-Frac**	*com A*
—	4	2	**Friend Will Come Tonight, A**	*war-mel A*
—	9	3	**Fuller Brush Man, The**	*cri-com A*
—	1	5	**Gallant Blade, The**	*mel-c AYC*
—	6	2	**Gallant Legion, The**	*mus-wes AYC*
—	5	4	**Gay Intruders, The**	*com A*
—	—	3	**Gelosia**	*cri-dr A*
—	2	6	**Gentleman from Nowhere, The**	*mys A*
—	2	4	**Girl from Manhattan, The**	*com AY*
—	12	3	**Give My Regards to Broadway**	*mus-com-c AY*
—	1	3	**Golden Eye, The**	*cri-mel AY*
—	9	10	**Good Sam**	*com A*
—	12	2	**Green Grass of Wyoming**	*dr-c AYC*
—	1	4	**Guns of Hate**	*wes AYC*
8	5	1	**Hamlet**	*dr A*
—	2	11	**Hatter's Castle**	*mel A*
—	3	13	**Hazard**	*com A*
—	—	5	**Heart of Virginia**	*dr AYC*
—	2	3	**Henry IV**	*hist-dr A*
—	6	1	**Hills of Home**	*dr-c AYC*
—	6	4	**Hollow Triumph**	*mel A*
—	—	4	**Honorable Catherine, The**	*com A*
—	3	5	**I, Jane Doe**	*mel A*
—	3	2	**I Surrender Dear**	*mus-com AY*
—	1	7	**I Wouldn't Be in Your Shoes**	*cri-mel A*
—	2	3	**Illegals, The**	*doc-dr A*
—	3	2	**In This Corner**	*mel A*
—	6	7	**Innocent Affair, An**	*mus-com A*
4	12	2	**Iron Curtain, The**	*doc-mel AYC*
—	3	8	**Isn't It Romantic?**	*mus-com A*
—	4	2	**Jinx Money**	*mys-mel AY*
2	2	—	**Joan of Arc**	*dr AY*
—	5	—	**Joe Palooka in Winner Take All**	*mel AY*

A	B	C		
1	10	—	**Johnny Belinda**	*dr A*
1	11	5	**Julia Misbehaves**	*com A*
—	3	—	**June Bride**	*com A*
1	3	1	**Jungle Patrol**	*war-mel A*
3	8	3	**Key Largo**	*mel A*
—	5	1	**Kidnapped**	*mel AYC*
—	—	3	**King of the Bandits**	*wes AYC*
—	1	5	**King of the Gamblers**	*mel A*
—	3	1	**Kiss the Blood Off My Hands**	*cri-mel A*
—	—	6	**Lady at Midnight**	*mys-mel AY*
1	9	4	**Larceny**	*mel A*
4	6	—	**Louisiana Story**	*mus-doc AYC*
—	8	4	**Loves of Carmen, The**	*dr-c A*
—	1	2	**Loves of Casanova**	*mus-dr A*
—	1	5	**Loves of Don Juan, The**	*dr A*
—	10	4	**Luck of the Irish, The**	*fan AYC*
—	5	11	**Lulu Belle**	*mus-mel A*
—	8	6	**Luxury Liner**	*mus-com-c AYC*
—	—	3	**Lysistrata**	*dr A*
—	1	4	**Macbeth**	*dr AY*
—	8	4	**Man-Eater of Kumaon**	*mel A*
1	1	1	**Marius**	*com A*
—	2	4	**Marriage in the Shadows**	*war-dr A*
—	2	2	**Marshal of Amarillo**	*wes AYC*
3	10	4	**Melody Time**	*mus-car-c AYC*
—	3	1	**Merry Chase, The**	*com A*
—	5	3	**Michael O'Halloran**	*dr AYC*
—	4	6	**Mickey**	*mus-com-c AYC*
—	1	3	**Million Dollar Weekend**	*mus-mel A*
—	6	5	**Mine Own Executioner**	*mel A*
—	4	1	**Miracle in Harlem**	*mus-mel-c A*
—	2	3	**Miraculous Journey**	*mel-c AYC*
—	7	1	**Miss Tatlock's Millions**	*com A*
—	2	6	**Moonrise**	*dr A*
1	12	2	**Mr. Blandings Builds His Dream House**	*com A*
—	4	2	**Mr. Orchid**	*war-dr A*
—	11	3	**Mr. Peabody and the Mermaid**	*fan A*
—	4	4	**Murderers Among Us**	*war-dr A*
—	3	1	**Music Man**	*mus-com AY*
—	3	3	**My Dear Secretary**	*com A*
—	3	4	**My Dog Rusty**	*dr AY*
—	5	3	**Mystery in Mexico**	*mys-mel A*
—	2	4	**Nais**	*dr A*
—	11	3	**Night Has a Thousand Eyes**	*mel A*
—	4	4	**Night Wind**	*dr AY*
—	4	5	**No Minor Vices**	*com A*
—	6	1	**Noose Hangs High, The**	*com AYC*
—	7	1	**Northwest Stampede**	*mel-c AYC*
—	3	1	**Not Guilty**	*mel A*
—	7	5	**October Man, The**	*cri-mys A*
—	4	4	**Old Los Angeles**	*mus-wes AYC*
—	3	—	**Olympic Cavalcade**	*doc AYC*
—	9	8	**On An Island With You**	*mus-com-c AY*
—	6	4	**One Touch of Venus**	*mus-fan A*
—	1	4	**Out of the Storm**	*mys-mel AY*
—	1	2	**Overland Trails**	*wes AYC*
2	7	2	**Paisan**	*war-dr A*
—	3	—	**Paleface, The**	*mus-com-c AY*
—	—	3	**Partners of the Sunset**	*mus-wes AY*
—	—	3	**Phantom Valley**	*mus-wes AYC*
1	12	4	**Pirate, The**	*mus-dr-c A*
1	10	4	**Pitfall, The**	*mel A*
—	2	6	**Port Said**	*mel AY*
—	3	3	**Portrait of Innocence**	*dr A*
—	1	2	**Prairie, The**	*hist-nov A*
—	2	5	**Private Life of An Actor**	*biog A*
—	5	1	**Quiet Weekend, A**	*dr AY*
—	2	11	**Race Street**	*cri-mel A*
—	8	7	**Rachel and the Stranger**	*mus-dr A*
—	—	3	**Range Renegades**	*mus-wes AYC*
—	8	4	**Raw Deal**	*cri-mel A*
—	6	1	**Razzia**	*mel A*
6	10	1	**Red River**	*wes-dr A*
2	2	1	**Red Shoes, The**	*mel-c AY*
—	4	8	**Return of the Bad Men**	*wes AYC*
—	4	—	**Return of Wildfire, The**	*wes-c AYC*
—	8	6	**River Lady**	*mel-c A*
—	5	1	**Road House**	*mus-mel A*
—	4	2	**Rocky**	*dr AYC*
—	5	1	**Rogues' Regiment**	*war-mel A*
—	12	1	**Romance on the High Seas**	*mus-com-c A*
—	3	2	**Room Upstairs, The**	*dr A*
—	10	6	**Rope, The**	*cri-dr-c A*
—	—	3	**Rossini**	*mus-biog A*
—	3	1	**Rusty Leads the Way**	*dr AYC*
—	7	8	**Ruthless**	*dr A*
—	1	4	**Ruy Blas**	*hist-dr AY*
1	9	7	**Saxon Charm, The**	*dr A*
—	3	4	**Sealed Verdict**	*war-dr A*
1	6	—	**Secret Land, The**	*doc-c AY*
—	1	6	**Secret Service Investigator**	*cri-mel AY*
—	4	5	**Shaggy**	*dr-c AYC*
—	1	3	**Shanghai Chest, The**	*mys-mel AY*
—	1	4	**Shed No Tears**	*cri-mel A*
—	1	5	**Showtime**	*mus-com A*
—	—	4	**Silent Conflict**	*wes AYC*
—	3	9	**Silver River**	*wes-dr A*
—	1	2	**Singin' Spurs**	*mus-wes AYC*
—	2	1	**Sinister Journey**	*wes AY*
—	7	4	**16 Fathoms Deep**	*mel-c AY*
—	1	5	**Smart Girls Don't Talk**	*cri-mel A*
—	2	1	**Smugglers Cove**	*mel AY*
—	8	10	**So Evil My Love**	*cri-mel A*
—	5	2	**So This Is New York**	*com A*
—	9	2	**Sofia**	*mus-mel-c A*
—	7	6	**Song is Born, A**	*mus-com-c A*
—	2	2	**Song of Idaho**	*mus-wes AY*
—	11	7	**Sorry, Wrong Number**	*mel A*
—	8	5	**Southern Yankee, A**	*com AYC*
—	5	3	**Spiritualist, The**	*mys-mel A*
—	1	4	**Stage Struck**	*cri-mel A*
—	8	2	**Station West**	*mus-mel AYC*
—	1	4	**Strange Victory**	*doc A*
—	7	—	**Strawberry Roan, The**	*mus-wes-c AYC*
1	16	—	**Street With No Name, The**	*cri-mel A*
—	—	7	**Sword of the Avenger**	*dr-c AY*
1	6	2	**Symphonie Pastorale**	*dr A*
2	10	6	**Tap Roots**	*dr-c A*
—	3	5	**Texas, Brooklyn and Heaven**	*com A*
—	9	9	**That Lady in Ermine**	*mus-com-c A*
1	3	1	**They Are Not Angels**	*war-dr A*
—	3	4	**Thirteen Lead Soldiers**	*cri-mel AY*
2	6	3	**Three Musketeers, The**	*dr-c AY*
—	6	1	**Thunderhoof**	*mel-c A*
—	2	4	**Timber Trail, The**	*mus-wes-c AYC*
—	11	5	**Time of Your Life**	*com A*
—	1	2	**Tragic Hunt**	*dr A*
—	2	1	**Trail to Laredo**	*mus-wes AYC*
—	1	6	**Train to Alcatraz**	*mel A*
—	—	6	**Trapped by Boston Blackie**	*mys-mel AY*
—	—	3	**Triggerman**	*wes AYC*
—	1	6	**Triple Threat**	*dr AYC*
—	4	1	**Twisted Road, The**	*cri-dr A*
—	5	5	**Two Guys from Texas**	*mus-com-c AY*
—	1	3	**Under California Stars**	*mus-wes-c AYC*
—	3	4	**Unfaithfully Yours**	*com A*
—	6	11	**Up In Central Park**	*mus-com A*
—	2	4	**Urubu**	*adv A*
—	—	5	**Vacation Days**	*mus-wes AYC*
—	3	6	**Variety Time**	*mus-com AY*
—	8	8	**Velvet Touch, The**	*dr A*
—	1	9	**Vicious Circle, he**	*cri-dr A*
—	8	2	**Walk a Crooked Mile**	*mel A*
—	6	5	**Wallflower**	*com A*
—	5	10	**Walls of Jerico, The**	*dr A*
—	4	5	**Waterfront at Midnight**	*cri-mel A*
—	1	2	**West of Sonora**	*mus-wes AYC*
—	2	4	**Where Words Fail**	*mus-dr A*
—	1	4	**Whirlwind Raiders**	*mus-wes AYC*
—	—	3	**Whispering City**	*mys-mel A*
—	—	3	**White Stallion**	*wes AYC*
—	—	4	**Will It Happen Again?**	*war-doc A*
—	5	1	**Winner's Circle, The**	*dr-c AYC*
—	2	13	**Winter Meeting**	*dr A*
—	10	4	**Woman in White, The**	*cri-mel A*
—	3	—	**Your Red Wagon**	*dr A*

The Consumers' Observation Post

(Continued from page 4)

garages may be naturally inclined to skimp a bit on the amount of coating material used.) The consumer having this work done will be well advised to urge that a coating of full thickness be applied throughout; if possible, to examine the job closely, before acceptance, when the work has been done.

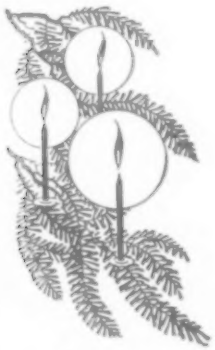
* * *

THE OWNER of a Lincoln Zephyr or Mercury car which needs extensive engine repairs but which in other respects is in good shape may find it worth while to consider having a new 1949 Ford 100-horsepower engine installed in place of the regular engine. The new Ford engine, which is said to be in ample supply, can be fitted in a Mercury or Lincoln Zephyr car with very little trouble; and it is said to give very good performance. (There would be some loss of performance when installed in a Lincoln Zephyr which originally used a 120- or 130-horsepower engine.) Installation requires about 1-1/2 days. The cost for the job will depend upon the turn-in value of the old engine. In one case reported by a subscriber in the Far West, a 1949 Ford engine was installed in a 1938 Lincoln Zephyr at a net cost of $350. This included in addition to the new engine, a new radiator, starter, generator, and air cleaner, and there was an allowance of $100 for the old engine.

* * *

RECENTLY TESTED:

RAD Easy Cleaner (Milrose Products Co., New York City) is a product often sold by demonstrators in 5-and-10-cent stores. It comes in a screw-capped jar marked, "1 pint liquid wt.," selling at 50 cents, and is a damp granular yellowish solid said to contain no lye, soap, or caustic soda; "will not scratch or mar--will not clog drains." The directions call for one teaspoonful in one gallon of water (hot or cold) for all types of cleaning, but warn that "RAD cannot be used on non-washable materials such as crepes, weighted silks, acetates, etc.; rugs and upholstery must be tested for color fastness before using RAD." A chemical analysis indicated that the familiar trisodium phos-



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phate has turned up again as the principal ingredient of a popular cleanser. RAD was estimated to be composed of the following ingredients: trisodium phosphate (hydrated), 78%; soap (although the label claim said RAD contained no soap), 9%; pine oil, 3%; washing soda, 10%. RAD was labeled as suitable for mopping, and "for all types of cleaning," but it would be unsuitable for use on linoleum. It would likewise be unsuited for use on varnished or painted floors in the stronger solution recommended on the label for use when stubborn dirt was to be removed.

Mennen Skin Bracer (The Mennen Co., Newark, N. J.) is a green, transparent liquid selling for 89 cents (plus 18 cents federal tax) for 12 oz. It is recommended by the labeling as an after-shave lotion and a deodorant. An analysis indicated that the essential ingredients were: special denatured alcohol, 53%; water, 46%; and odor and color, 1%. The "intriguing aroma" which "wows the ladies," according to the advertising, included lilac, vanillin, and menthol. As a so-called astringent, experts have found that cold water is just as effective and cheaper than alcohol and water. The deodorant action is essentially that of eau de cologne, which is simply covering one odor with another. Daily use of a preparation containing menthol is considered undesirable.

Cold Wave Permanents, whether given at home or by a professional beauty operator, are based on the use of a wave fluid of which the essential ingredient is thioglycollic acid. The waving fluid for the Toni, Portrait, and Richard Hudnut home wave kits was found to contain thioglycollic acid in amounts ranging from 4.7 to 5.9 percent. The neutralizer used to stop the action in all three kits was found to contain potassium bromate as the essential ingredient. The professional cold wave solutions, including Zaar, Melody Radio Wave, Cover Girl Radio Wave, Frolic Radio Wave, Exotic Radio Wave, Helene Curtis, Lustron-Hi Speed, all contained thioglycollic acid in percentages ranging from 5.5 in the case of Zaar to 6.6 in the case of Frolic Radio Wave. The professional waves all used 20-volume hydrogen peroxide to neutralize the thioglycollic acid at the end of the waving period. As CR pointed out in October, the Food and Drug Administration has given an official O.K. to the cold permanent wave method, but there have been a number of cases of allergic reaction to its use. Women who are anemic or subject to allergies had best use the machineless wave.

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Phonograph Records

By Walter F. Grueninger

Please Note: In the ratings AA indicates highly recommended; A, recommended; B, intermediate; C, not recommended.

ORCHESTRA

Berlioz: *Symphonie Fantastique.* Concertgebouw Orchestra of Amsterdam under von Beinum. 12 sides, English Decca Set 56. $13.65. A controversial work which I admire. The performance certainly equals that of the Monteux-Victor Set 994 ($8.50) and the bland, transparent, wide-range recording tops it.
Interpretation AA
Fidelity of Recording AA

Prokofieff: *"Classical" Symphony* (3 sides) & Chout — *Danse Finale* (1 side). Boston Symphony Orchestra under Koussevitzky. RCA Victor Set 1241. $3.50. As delightful as a holiday on the beach. Long a specialty of Koussevitzky, whose old recording is still his closest competitor. More detail of this remarkable reading is now revealed by Victor's engineers.
Interpretation AA
Fidelity of Recording AA

Waltzes of Johann Strauss. New Symphony Orchestra under Krips. 6 sides, London Set 28. $7.35. "Acceleration," "Roses from the South," "Blue Danube" played straightforwardly and recorded with over-all mike technique in a resonant chamber. Nothing striking, however, in playing or recording.
Interpretation A
Fidelity of Recording A

CONCERTO

Khachaturian: *Violin Concerto.* Oistrakh (violin) and the Russian State Symphony Orchestra under Gauk. 10 sides, Mercury Set 10. $7.84. Thin showpiece written in 1940, stemming from music of the Near East, though "packaged" in academic style. Dazzling performance. Though the frequency and dynamic range is not particularly wide, the recording nearly creates the illusion of hearing the music in a concert hall.
Interpretation AA
Fidelity of Recording A

Liszt: *Concert No. 2.* Malcuzynski (piano) and the Philharmonia Orchestra under Susskind (5 sides) & **Chopin:** *Etude No. 19* (1 side). Malcuzynski (piano). Columbia Set 777. $4.75. Pretentious work heard seldom nowadays. Commendable teamplay — imaginative and sympathetic reading — first rate recording.
Interpretation AA
Fidelity of Recording AA

Saint-Saëns: *Concerto No. 2.* Moiséiwitsch (piano) and the Philharmonia Orchestra under Cameron. 6 sides, RCA Victor Set 1255. $4.75. Brilliant work. Crisp performance and English recording that lacks the highest frequencies but is a joy to hear because of smoothness, clarity, body and resonant chamber.
Interpretation AA
Fidelity of Recording AA

CHAMBER AND INSTRUMENTAL

Albéniz: *Iberia — Books I and II.* Arrau (piano). 10 sides, Columbia Set 757. $7.25. Six pieces in which Spanish rhythms and color are brought to a high state of pianistic refinement. Arrau performs ably but misses some of the fire. Acceptable recording though surfaces are noisy in low level passages.
Interpretation A
Fidelity of Recording A

Shostakovitch: *Quartet No. 3.* Fine Arts Quartet. 8 sides, Mercury Set 3. $6.57. Composed in 1946 and played by this group in its American premiere. The work is direct, violent, cold, calculating. Performance emphasizes the music's harshness. So does the recording, though it is remarkably wide-ranged and pressed on quiet surfaces.
Interpretation AA
Fidelity of Recording A

VOCAL

Berlioz: *Requiem* Emile Passani Choir and Orchestra under Fournet. 22 sides, Columbia Set 769. $15.50. First complete set of this fabulous, dramatic work. Impassioned, convincing performance. The recording was made during the Paris occupation, in the Church of Saint Eustache. Microphones are close to the performers resulting in less than ideal depth even though echo is heard occasionally. Ample frequency and dynamic range. Overall, a welcome set.
Interpretation AA
Fidelity of Recording A

Occasional Gregorian Chants. Choristers and Schola of the Holy Cross Parish of St. Louis under Very Reverend Martin B. Hellriegel. Sets OC 2 and 3. Each, 10 sides; each, $7.87. (Issued by Gregorian Institute of America, 2132 Jefferson Avenue, Toledo 2, Ohio.) The official music of the Catholic Church — prayer sung in unison by boy and girl sopranos without instrumental accompaniment. Reverent performance. Pleasant recording and satisfactory record surfaces.
Interpretation AA
Fidelity of Recording AA

Saint-Saëns: *Samson and Delilah.* Jose Luccioni, Helene Bouvier, etc. (singers) and the Chorus and Orchestre National de l'Opera under Fourestier. 30 sides, 2 volumes, Columbia Set OP 28. $21.50. The complete opera sung in French. Luccioni, as Samson, emerges as the star performer with his true, ringing, dramatic tenor. Bouvier, as Delilah, sings in the refined French tradition but her light voice lacks the seduction of other Delilahs I have heard. Fourestier's direction is well paced. Orchestral recording lacks body in the high end. Singers are close to the mike, sometimes out of focus with the too faint orchestra. Studio-type recording. In general, a welcome set even though it is not perfect.
Interpretation A
Fidelity of Recording A

Strauss: *Elektra* — Final Scene. Schluter, Welitsch, Schoeffler, Widdop, etc. (singers) and the Royal Philharmonic Orchestra and Chorus under Beecham. 8 sides, RCA Victor Set 1247. $6. The only available recording of any substantial part of this opera. It presents the complete final scene beginning with Orestes' return. The opera, which stems from Sophocles' work, is a loud, passionate, tragic one act masterpiece in which vocal declamation shares honors with the orchestra. No pretty tunes here! Never was Sir Thomas more energetic and brilliant and his cast, selected with the assistance of the composer, fully meets the stiff requirements for dramatic gifts. First rate recording.
Interpretation AA
Fidelity of Recording AA

Williams: *Mass in G Minor.* Fleet Street Choir under Lawrence. 6 sides, English Decca Set 57. $7.35. Intimate, unpretentious, a cappella work that has a good deal in its favor. Sung with feeling and spaciously recorded.
Interpretation AA
Fidelity of Recording AA

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LIGHT

Gems from Sigmund Romberg Shows. Vol. II. Romberg and His Orchestra with Chorus and soloists Rowe, Cornell, Brooks. 8 sides, RCA Victor Set 1256. $5. Solos and duets: "Wanting You," "Song of Love," "Desert Song Valse," etc. The chorus, on several sides, suggests a radio production but otherwise the performance is suave though not thrilling.
Interpretation A
Fidelity of Recording AA

Polka 'Round the World. Johnny Martin and His Headliners (orchestra). 6 sides, Capitol Set C C 107. $3.15. Much merriment in these six polkas played by a small orchestra. Easy, loud-volume recording, limited in highs to about 6,000 cps.
Interpretation AA
Fidelity of Recording A

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